COLORADO MESA UNIVERSITY

CATALOG

2017 – 2018

coloradomesa.edu/academics

2017-2018 Academic Calendar

Summer Semester 2017

May 15.....First day of classes for First (4-week) Session
May 29.....Memorial Day observance – NO CLASSES
June 8 .....Final exams and last day of May session
June 12.....First day of classes for Second (4-week) and 7-week Sessions
July 4 .....Independence Day Holiday – NO CLASSES
July 6 .....Final exams and last day of June (4-week) Session
July 10.....First day of classes for Third (3-week) Session
July 27 .....Final examinations for Third (3-week) and 7-week Sessions
July 27 .....Summer Sessions end

Fall Semester 2017

August 7 .....Residency petitions due to Tuition Classification Officer (Admissions Office)
August 21 .....First day of classes
September 5.....Last day to add or drop a full semester class
September 5.....Fall census – date after which credit hours are counted in COF attempted hours
September 11.....Late Start session begins
October 1 .....Deadline for filing Intent to Graduate Form with Registrar's Office for spring and summer graduates
October 13.....Fall Break – NO CLASSES
October 16.....Last day to withdraw from full semester classes with a grade of "W"
October 16.....Second module classes begins
October 30.....Priority registration for spring 2018 begins
November 20-24 .....Thanksgiving Holiday – NO CLASSES
December 11–14.....Final examinations
December 14.....Fall semester ends
December 15.....Commencement

Spring Semester 2018 (including January Term)

January 2 .....Residency petitions due to Tuition Classification Officer (Admissions Office)
January 3–13 .....January Term
January 15 .....Martin Luther King, Jr. Day – NO CLASSES
January 16 .....First day of classes
January 31 .....Last day to add or drop a full semester class
January 31 .....Spring census – date after which credit hours are counted in COF attempted hours
February 5 .....Late Start session begins
March 1.....Deadline for filing Intent to Graduate Form with Registrar's Office for fall graduates
March 12–16.....Spring Break – NO CLASSES
March 19.....Last day to withdraw from full semester classes with a grade of "W"
March 19.....Second module classes begin
March 26.....Priority registration for summer and fall 2018 begins
May 7–10.....Final examinations
May 10.....Spring semester ends
May 12.....Commencement

Colorado Mesa University

2017-2018 Catalog

If you need to request this information in an accessible format (Braille, digital, or large print) please contact the CMU Marketing Office at **marketing@coloradomesa.edu** or **970.248.1412**.

1100 North Avenue, Grand Junction, Colorado 81501-3122
970.248.1020 • 800.982.6372 • coloradomesa.edu

HEOA (Higher Education Opportunity Act) and Gainful Employment Institution Disclosure Information

In compliance with the Higher Education Opportunity Act of 2008, information about Colorado Mesa University is available on the University's website (http://www.coloradomesa.edu/ir/HEOADisclosures.html). Information disclosed includes program information, physical plant facilities, faculty information, financial aid and textbook information, as well as student-right-to-know information.

In compliance with revisions to the Student Assistance General Provisions regulations-to improve disclosure of relevant information and to establish minimal measures for determining whether certain postsecondary educational programs lead to gainful employment in recognized occupations- information about gainful employment is also available on the University's website at http://www.coloradomesa.edu/gainfulemployment/index.html

Colorado Mesa University (CMU) is accredited by the Higher Learning Commission (HLC).
Higher Learning Commission
230 South LaSalle Street, Suite 7-500, Chicago, Illinois 60604-1411
Phone: 800.621.7440 / 312.263.0456 | Fax: 312.263.7462 | info@hlcommission.org

Verification of CMU's status can be found on the HLC web site at https://www.hlcommission.org.

General Policy Statement

Colorado Mesa University is a comprehensive coeducational institution operated under the governance of the Board of Trustees of Colorado Mesa University. The programs, policies, statements, and procedures contained in this catalog are subject to change by the University without prior notice. Colorado Mesa University reserves the right to, at any time, withdraw courses or modify the rules, calendar, curriculum, graduation procedures, and any other requirements affecting students. While the information contained in this catalog is current and correct insofar as possible at the time of publication, students are advised to check with appropriate University officials and online program sheets for up-to-date information.

This catalog is intended for the guidance of students and faculty but does not constitute a guarantee that all courses listed will actually be offered during any particular academic year. Colorado Mesa University reserves the right to withdraw or add courses prior to the beginning of any semester or summer term. In some programs, certain courses may be offered on an alternate-year basis or as determined by apparent demand. All program offerings are contingent upon adequate appropriations by the Colorado General Assembly.

Colorado Mesa University is committed to providing admission or access to, or treatment or employment in, its educational endeavors, consonant with applicable laws and without regard to race, creed, color, religion, sex, disability, age, national origin, veteran status, marital status or sexual orientation.

Inquiries may be made to the Affirmative Action Officer, Human Resources Office, Lowell Heiny Hall, Room 237.

Colorado Mesa University is a Drug-Free Workplace. All employees and students of the University agree to abide by the requirements in the Federal Drug-Free Workplace Act and the policies stated in the brochure entitled Drug-Free Schools, Campuses and Workplaces Drug Use and Alcohol Abuse Prevention Program. All employees and students are provided copies.

As required by the Campus Security Act, Colorado Mesa University publishes campus safety policies and statistics annually. Copies of the annual report are available at coloradomesa.edu/security/index.html.

FERPA Policy Statement

The Family Educational Rights and Privacy Act (FERPA) provides students who are enrolled in an institution of postsecondary education the right to inspect, review, and challenge their educational records. Colorado Mesa University has the responsibility of maintaining and protecting the confidentiality of students' official educational records. Colorado Mesa University also supervises the access to and/or release of educational records of its students.

FERPA covers enrolled and former students, including those who are deceased. Students who are not accepted to Colorado Mesa University, or if accepted, do not attend, have no rights under FERPA. In addition, the University will not release personally identifiable records of students to any individual, agency or organization without the prior written consent of the student, except as provided by FERPA. For further information related to FERPA, see the Registration section of this catalog.

How to Use This Catalog

This catalog is designed to assist all types of students—those considering college for the first time, those thinking of transferring from a community college or four-year institution, and those already attending Colorado Mesa University—in choosing the program of study that best fits their aspirations and goals. In this catalog you'll find admissions guidelines, financial aid information, and academic requirements so that you can make an educated decision about your future. In addition, the catalog describes aspects of student life at CMU and opportunities you'll find for personal growth outside the classroom.

If you're thinking about applying to Colorado Mesa University, follow these steps:

Step 1: See page 15 for information on admission, registration, tuition, expenses, and financial aid.

Step 2: Review the matrix beginning on page 11 to find programs of study that fall within your area of interest.

Step 3: See the Programs of Study section, beginning on page 59, for each program that interests you. For detailed degree requirements visit **coloradomesa.edu/academics**.

Step 4: Look up descriptions for some of the courses listed in the program. Courses are listed alphanumerically by course prefix beginning on page 122. Courses that fulfill the CMU essential learning degree requirements are listed on page 52.

Step 5: Finally, once you've reviewed the programs offered, see page 33 to learn about student academic support, activities and services at Colorado Mesa University.

If you're already a student at Colorado Mesa University, you can use this catalog for the following:

- Choose a major (follow Steps 1, 2, and 3 above.) Once you've declared a major contact the appropriate department to meet with your faculty advisor. If undeclared, contact the Advising Center to meet with a academic advisor and discuss options.
- Keep track of your academic progress (review the requirements for your program of study.)
- Review courses, both required and elective (courses are listed alphanumerically by course prefix, beginning on page 122.)
- Review degree requirements and essential learning courses beginning on page 48.

Step 1: Learn about admission, registration, tuition, expenses, and financial aid on pages 15-22.

Steps 2 and 3: Review the Programs of Study matrix on pages 11-15. For details visit pages 59-106.

Step 4: Look up course descriptions on pages 122-257.

Step 5: Learn about support, activities, and services on page 33.

To learn more about career opportunities and programs of study available at Colorado Mesa University, you also may want to view the Guide to Programs of Study booklet, program sheets that detail degree requirements and provide suggested course sequencing, and the Two-Year Course Planning Calendar/Matrix.

All are available online at coloradomesa.edu/academics.

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Welcome to Colorado Mesa University

Overview of Colorado Mesa University

The founding of Grand Junction Junior College in 1925, with 39 students enrolled in seven classes, marked the beginning of post-secondary education on Colorado's Western Slope. As Mesa Junior College, the number of students grew to 270 by fall 1937; headcount increased to 1,300 by 1963. Over that period, the range of community college programs expanded, and an area vocational school was added in 1967. By 1974, the college had evolved into a baccalaureate-granting institution, leading enrollment to triple in 16 years and reach 3,891 in fall 1979. In 1988, the College was renamed Mesa State College and in 1994 the Colorado legislature authorized Mesa State College to offer selected graduate degrees in response to regional needs.

With the addition of graduate programs, Mesa State College became the only four-year institution in Colorado to offer a full-range of undergraduate programming that spans technical certificates, associate degrees (both academic and vocational), and baccalaureate degrees to graduate certficates and degrees.

In 2003, Mesa State College was statutorily assigned the responsibility of meeting the educational needs for 14 Western Slope counties: Delta, Eagle, Garfield, Grand, Jackson, Mesa, Moffat, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Miguel and Summit.

In 2005, Mesa State College formally created a two-year, open admission division: Western Colorado Community College.

The role and mission of the institution was reenacted in 2010 by the Colorado General Assembly (Colorado Revised Statutes 23-53-101) and amended in 2011 when Mesa State College was renamed Colorado Mesa University.

After a 2012 amendment, the role & mission is:

There is hereby established a university at Grand Junction, to be known as Colorado Mesa University, which shall be a general baccalaureate and graduate institution with selective admission standards. Colorado Mesa University shall offer liberal arts and sciences, professional, and technical degree programs and a limited number of graduate programs. Colorado Mesa University shall also maintain a community college role and mission, including career and technical education programs. Colorado Mesa University shall receive resident credit for two-year course offerings in its commission-approved service area. Colorado Mesa University shall also serve as a regional education provider.

Institutional Mission Statement

Committed to a personal approach, Colorado Mesa University is a dynamic learning environment that offers abundant opportunities for students and the larger community to grow intellectually, professionally, and personally. By celebrating exceptional teaching, academic excellence, scholarly and creative activities, and by encouraging diversity, critical thinking, and social responsibility, CMU advances the common good of Colorado and beyond.

Institutional Vision and Values

It is the year 2020 and Colorado Mesa University has continued to mature into an institution of higher education that successfully prepares students from diverse backgrounds for lives of career and service anywhere in the world. Over the next decade, Colorado Mesa University will seek to be the first choice institution for students, faculty, and staff.

To achieve this vision Colorado Mesa University will leverage:

- An adaptable, flexible approach to learning that allows students to choose from multiple and potentially integrated pathways to achieve certification, associates, bachelors, and graduate degrees.

- A highly qualified faculty that excels in teaching and interacting with students.
- A curriculum, often bridging liberal education and professional programs, that successfully prepares students for the 21st century in the areas of personal and social responsibility, civic engagement, ethics, and intercultural/global learning.
- Continued investment in facilities and technology that expand, expedite, and enhance learning for every student.
- Community support from businesses, industries, alumni, and residents of the region.
- A wide array of academic programs that are improved on an on-going, continuous basis for quality and relevance to Western Colorado's needs in the context of an ever-changing world.
- An administration that uses human and natural resources wisely, embraces excellence, is committed to shared governance, and is focused on the future.

Colorado Mesa University in 2020 will be respected as a learning community that embraces diversity of students, faculty, staff, ideas, and degree levels, while maintaining a quality educational environment that focuses on serving its many constituents. As it assumes an expanded leadership role, CMU will expand its public engagement of the region's stakeholders by serving as the primary intellectual and cultural center and promoting the exchange of ideas that are of regional, national, and international importance.

Colorado Mesa University values:

- high quality education in a student-centered environment;
- small class sizes and a high level of student/faculty interaction;
- a learning environment that develops and promotes the skills of inquiry, reflection, critical thinking, problem-solving, innovation, teamwork, and communication in students;
- student choice in academic programming that prepares future leaders to function as productive and responsible members of a global society;
- opportunities that engage students in applied learning;
- a faculty recognized for their professional expertise and quality of instruction;
- a staff committed to the highest quality of service to the College community;
- an attainable, accessible post-secondary experience for students in and outside of Western Colorado that emphasizes continuous improvement;
- a vibrant and varied campus setting that values diversity and diverse activities, and encourages involvement and interaction outside the classroom;
- a culture committed to integrity and academic and intellectual freedom;
- a community and region that supports the College in multiple ways;
- state-of-the-art facilities and technologies that enhance the learning environment; and
- a diversity of students, faculty, staff that promotes a balanced exchange of ideas.

Accreditation

Colorado Mesa University is accredited by and a member of The Higher Learning Commission:

higherlearningcommission.org or
230 South LaSalle Street, Suite 7-500
Chicago, IL 60604-1413; 800.621.7440;
312.263.0456; info@hlcommission.org

Various programs at Colorado Mesa University are accredited and/or approved by appropriate state and national agencies:

- Athletic Training: The Athletic Training Program at Colorado Mesa University is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). The program has been placed on probation as of February 24, 2017, by the CAATE, 6850 Austin Center Blvd., Ste. 100, Austin, TX 78731-3101.

  The Athletic Training Program is voluntarily withdrawing its accreditation effective May 2019. It is the intent of the university to develop a graduate athletic training program beginning as early as Fall 2019. More information will be posted on the CMU website as it becomes available. This new graduate program will be designed in accordance with the State of Colorado Department of Regulatory Agencies (DORA), the Board of Certification (BOC), and the CAATE.
- Medical Laboratory Technician: National Accrediting Agency for Clinical Laboratory Sciences.
- Music: National Association of Schools of Music.
- Nursing: Commission on Collegiate Nursing Education (graduate level and baccalaureate). Accreditation Commission for Education in Nursing (certificate level). Colorado Mesa University is also approved by the Colorado State Board of Nursing to prepare nurses for licensure application.
- Peace Officer Standards and Training (POST): Approved by the Colorado Peace Officer Standards and Training Board.
- Radiologic Technology: Joint Review Committee on Education in Radiologic Technology.
- Social Work: Commission on Accreditation-Council on Social Work Education.
- Teacher Education: Approved by the Colorado Department of Higher Education and the Colorado Department of Education to prepare teachers for licensure application.
- Transportation Services (at WCCC): National Automotive Technicians Education Foundation.

Note: The Mechanical Engineering program, offered through the partnership program between Colorado Mesa University and the University of Colorado Boulder, is accredited by Accreditation Board for Engineering and Technology (ABET).

The University is designated as balanced arts and sciences/professions, some graduate coexistence as part of the Carnegie classification of higher education institutions.

Montrose Campus

Located at the Buell Higher Education Center in Montrose, the campus offers students the opportunity to complete an associate degree, or work toward their baccalaureate degree by completing the essential learning component. A limited selection of upper division coursework is offered via distance technology. The Montrose Campus offers coursework primarily in the afternoons and evenings to meet the needs of both traditional and working students. In addition to

the classrooms and office space, the campus houses computer labs and a telecommunications classroom.

The campus office is open from 8am to 5pm, Monday through Friday; phone 970.249.7009. Student services available at the office include admission, assessment, financial, and business. Academic advising services are available by appointment.

Tilman M. Bishop Campus

The Tilman M. Bishop Campus of Colorado Mesa University is the result of a partnership of the University, Mesa County Valley School District 51, and area businesses. The applied technology programs at the Bishop Campus serve the technical education needs of both university and area high school students, primarily those in District 51.

Students at the Bishop Campus—the main site of Western Colorado Community College, Colorado Mesa University's two-year division—can earn two-year associate degrees or technical certificates. High school students earn elective credits and, in many of the programs, university credits. Among the services available at the Bishop campus are college admission, class scheduling, academic and interest assessments, resume preparation, job interviewing skills, and placement in internships and jobs. For more information call 970.255.2600 or toll free, 888.455.2617.

Diversity Statement

Colorado Mesa University extends its services to anyone regardless of age, race, color, national origin, religion, sex, disability, veteran status, or sexual orientation.

Following is the statement of philosophy on diversity which has been adopted by the faculty at Colorado Mesa University:

"Colorado Mesa University is a community of scholars in the liberal arts tradition. As faculty we believe that all people, regardless of age, race, color, national origin, religion, sex, disability, veteran status, or sexual orientation, have something worthwhile to contribute and that these contributions benefit us all. Therefore, we intend that within our academic community all cultural differences will be treated with equal respect and tolerance. We desire that our students have the opportunity to appreciate the diversity of our modern world, and we encourage them to partake of the resources available within our community. As faculty we pledge ourselves to provide as many divergent cultural experiences for our students as the resources of the college and the needs of our disciplines allow."

"To further tolerance and appreciation of our society's diversity, Colorado Mesa University requires that all graduates fulfill General Education requirements. In doing so we honor the validity of a liberal education. We hope that the experience will help our students understand how to appreciate the true diversity of the world. Because diversity promotes multiple opinions, techniques, viewpoints and approaches, it is not the individual courses within the General Education program which we believe will further the above-stated goals, but the whole experience of the program itself."

Colorado Mesa University expects all members of the campus community to uphold the highest standards of civil and ethical conduct and to promote a culture of respect and inclusiveness. For more information on these expectations, go to http://www.coloradomesa.edu/trustees/documents/SafetyResolution.pdf.

Student Bill of Rights

The Colorado General Assembly implemented the Student Bill of Rights to assure that students enrolled in public institutions of higher education have the following rights:

1. A quality general education experience that develops competencies in reading, writing, mathematics, technology and critical thinking through an integrated arts and science experience;
2. Students should be able to complete their associate of arts and associate of science degree programs in no more than sixty credit hours or their baccalaureate programs in no more than one hundred twenty credit hours, unless there are additional degree requirements recognized by the commission;
3. A student can sign a two-year or four-year graduation agreement that formalizes a plan for the student to obtain a degree in two or four years, unless there are additional degree requirements recognized by the commission;
4. Students have a right to clear and concise information concerning which courses must be completed successfully to complete their degrees;
5. Students have a right to know which courses are transferable among the state public two-year and four-year institutions of higher education;
6. Students, upon successful completion of core general education courses, should have those courses satisfy the core course requirements of all Colorado public institutions of higher education;
7. Students have a right to know if courses from one or more public higher education institutions satisfy the students' graduation requirements;
8. 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.

Degrees and Programs of Study

Colorado Mesa University offers programs leading to awards in four levels - certificates (graduate, professional, and technical), associate degrees, baccalaureate degrees, and at the graduate degree level (e.g., master's and doctoral degrees). The matrix at the end of this section provides an overview of the offerings at each level.

General requirements for each degree and certificate program are listed in the graduation requirements sections of this catalog and in program sheets at coloradomesa.edu/academics. While these general requirements are as correct and current as possible at the time of publication, some changes may occur as programs are updated. Students seeking a specific degree or certificate must obtain a program sheet from the appropriate academic department detailing specific and current requirements for the award being sought and are responsible for meeting them.

Graduate degrees offered by Colorado Mesa University are:

- Master of Arts (MA) in Education
- Master of Business Administration (MBA)
- Master of Science in Nursing (MSN)
- Doctor of Nursing Practice (DNP)

Baccalaureate degrees offered are:

- Bachelor of Applied Science (BAS)
- Bachelor of Arts (BA)
- Bachelor of Business Administration (BBA)
- Bachelor of Fine Arts (BFA)
- Bachelor of Music (BM)
- Bachelor of Music Education (BME)
- Bachelor of Science (BS)
- Bachelor of Science in Nursing (BSN)
- Bachelor of Social Work (BSW)

These are programs of study that generally consist of 120 or more credit hours and provide extensive preparation in a specific major. Concentrations are available within many of the baccalaureate degrees.

Engineering: Through a partnership with the University of Colorado Boulder, students can complete a Bachelor of Science in Mechanical or Civil Engineering from the University of Colorado Boulder on the Colorado Mesa University campus.

Pre-Health Science Preparation: Admission to the study of dentistry, medicine, optometry, physical therapy, and veterinary medicine usually requires the completion of a baccalaureate degree, often in biological sciences. Students planning to enter one of these health fields should declare a major in one of the sciences after consultation with a faculty advisor.

Associate degrees are awarded in two broad areas:

- Associate of Arts or Associate of Science (AA, AS) degrees are available in a number of emphases at Colorado Mesa University. Students enrolling in these degrees may be preparing for immediate employment upon graduation or they may expect the two-year degree to be the first phase toward a baccalaureate degree. All AA and AS degrees include the statewide common core of general education curriculum and, when completed successfully, meet the lower-division essential learning requirements of most baccalaureate degree programs.

- Associate of Applied Science (AAS) degrees are offered in a variety of technical and vocational programs. AAS programs average two years in length.

Graduate certificates contain graduate level (5xx-7xx) courses. A student must be admitted as a graduate student to attempt a graduate certificate.

Professional certificates are comprised of primarily upper division (3xx-4xx) courses. For a student to attempt a Professional Certificate after the student has earned a baccalaureate degree, the student must be admitted to study as a post-baccalaureate student or as a graduate student.

Technical certificates are normally chosen by students whose immediate plans are a career in a technical area. They are typically comprised of lower division (1xx-2xx) courses. While the length may vary, these programs are usually one-year long and are designed to train for specific skills required for employment.

Non-Credit Continuing Education Courses

Non-credit continuing education courses toward personal, civic, vocational, and professional self-improvement are offered through the University's Extended Studies Program.

Programs of Study and Degrees Awarded

PC=Professional Certificate; TC=Technical Certificate; GC=Graduate Certificate
Learn more about programs of study available at Colorado Mesa University at **coloradomesa.edu/academics**.

PROGRAMS OF STUDY		LEVEL OF AWARD				
		Certificate	Associate	Baccalaureate	Graduate	Minor

NOTE: Students should consult the Financial Aid Office for eligibility requirements of undergraduate and graduate certificates.

Accounting	Concentrations: General Accounting; Public Accounting			BS	3+2 Program: BS + MBA See Business Admin	M
Addiction Studies						M
Agriculture Science			AS			
Animation, Film, Photography and Design				BFA		
Applied Business						
	Administrative Support; Frontline Supervision; Marketing Communication		AAS			
	Administrative Support; Business Foundations; Frontline Supervision; Graphics Technology; Marketing Graphics Technology; Office Technology	TC				
Archaeology	(also see Cultural Resource Management)					M
Art	Concentrations: Art History; Studio Art			BFA		
	Studio Art			BA		M
	K-12 Education Licensure (see Teacher Education below)			BFA		
Athletic Training	(no longer accepting undergraduate students)			BS		
Aviation Technology	Emphasis: Fixed-Wing		AAS			
Baking and Pastry			AAS			
	Bakeshop Production	TC				
Biological Sciences	Concentrations: Biology; Cellular, Molecular, and Developmental Biology; Ecology, Evolution, and Organismal Biology			BS		M
	Secondary Education Licensure (see Teacher Education below)			BS		
Business Administration	Concentrations: Business Economics; Emerging Markets; Energy Management/ Landman; Entrepreneurship; Finance; Hospitality Management; Human Resource Management; Information Systems; Insurance; Management; Managerial Informatics; Marketing			BBA	MBA 3+2 Programs: BS, Construction Management + MBA; BS, Accounting + MBA; BBA, Finance + MBA	M
Business Administration				BAS		
Chemistry	Concentrations: Biochemistry; Chemistry			BS		M
Civil Engineering				BSCE (Conferred by University of Colorado Boulder)		
Classical Studies						M
Computer Information Systems		PC	AS	BS, BAS		M
Computer Science	(Also see Cyber Security)			BS		M

PROGRAMS OF STUDY		LEVEL OF AWARD				
		Certificate	Associate	Baccalaureate	Graduate	Minor

NOTE: Students should consult the Financial Aid Office for eligibility requirements of undergraduate and graduate certificates.

Construction Electrical		TC	AAS			
Construction Management				BS	3+2 Programs: BS, Construction Manage-ment + MBA	
Construction Technology	Emphasis: Supervision		AAS			
	Emphasis: Craft Note: The AAS Construction Technology – Craft and the Technical Certificate Construction Technology programs are inactive.	TC	AAS			
Criminal Justice				BA		M
Criminal Justice	POST		AAS	BAS		
Culinary Arts			AAS			
	Food Preparation	TC				
Cultural Resource Management		PC				
Cyber Security		PC				
Dance				BFA		M
Decision Support Systems	(see Computer Information Systems)	PC				
Early Childhood Education	(see Teacher Education)					
Economics				See Business Admin		M
Education (see Teacher Education)	Cognates: Educational Leadership; English for Speakers of Other Languages; Exceptional Learner; Initial Teacher Licensure; Teacher Leader				MA, GC	
Electric Lineworker		TC	AAS			
Emergency Management and Disaster Planning		PC				
Emergency Medical Technician	Emphasis: Basic	TC				
	Emphasis: Paramedic	TC	AAS			
Energy Management/ Landman		PC		See Business Admin		
Engineering	Civil Engineering and Mechanical Engineering delivered in partnership by CMU with the University of Colorado Boulder; degree awarded by University of Colorado Boulder (also see Civil Engineering or Mechanical Engineering)					
English	Concentrations: Literature; Writing			BA		M
	Rhetoric and Literary Studies				GC	
	Secondary Education Licensure (see Teacher Education below)			BA		
Entrepreneurship		PC		See Business Admin		M
Environmental Science and Technology				BS		M
Exercise Science				BS		M
Finance				See Business Admin	3+2 Program: BBA, Finance + MBA	

PROGRAMS OF STUDY		LEVEL OF AWARD				
		Certificate	Associate	Baccalaureate	Graduate	Minor
Forensic Anthropology						M
Forensic Investigation – Criminal Justice						M
Forensic Investigation – Psychology						M
Forensic Science						M
Geographic Information Science & Technology		PC				M
Geosciences	Concentrations: Environmental Geology; Geology; Secondary Education Licensure (see Teacher Education below)		AS	BS		M
Graphic Design	Concentration: Visual Design			BFA		M
Health Information Technology Systems		PC			GC	
History				BA		M
	Secondary Education Licensure (see Teacher Education below)			BA		
Hospitality Management			AAS	BAS, BBA - see Business Admin		M
Information Communication Technology			AAS			
	Computer Technician; Help Desk Technician; Healthcare Information Networking; Network Technician	TC				
Insurance		PC		See Business Admin		
Interdisciplinary Studies				BAS		
International Studies						M
Jazz Studies						M
Kinesiology	Concentrations: Adapted Physical Education; Fitness and Health Promotion			BA		
	K-12 Education Licensure (see Teacher Education below)			BA		
Land Surveying and Geomatics		TC	AAS			
Liberal Arts	Emphases: Business Administration; Business Computer Information Systems; Early Childhood Education; Humanities; Social Science; University Studies		AA			
Liberal Arts	Emphases: Biology; Computer Science; Geology; Mathematics; Physics; Sport Management		AS			
Liberal Arts	General Studies			BA		
	Elementary Education Licensure: English; Mathematics; Social Science (see Teacher Education below)			BA		
Manufacturing Technology	Emphases: Computer-aided Design Technology; Machining Technology; Welding Technology		AAS			
	Specializations: Basic Welder; CAD/CAM; Computer-Aided Design Techology; Machine and Manufacturing Trades; Welding Technolgoy	TC				
Mass Communication	Concentration: Media Strategies and Applications			BA		M

PROGRAMS OF STUDY		LEVEL OF AWARD				
		Certificate	Associate	Baccalaureate	Graduate	Minor
Mathematics	Concentrations: Mathematics; Statistics		AS	BS		M
	Secondary Education Licensure (see Teacher Education below); Applied Mathematics			BS		
	Applied Mathematics				GC	
Mechanical Engineering				BSME (conferred by University of Colorado Boulder)		
Mechanical Engineering Technology			AAS	BS		
Medical Laboratory Technician			AAS			
Medical Office Assistant		TC	AAS			
Music	Concentration: Liberal Arts			BA		M
Music Performance				BM		
Music with Elective Studies in Business				BM		
Music Education (K–12)	(see Teacher Education)			BME		
Nurse Aide		TC				
Nursing		PN		BSN		
Nursing	Cognates (MSN): Advanced Nursing Practice; Nursing Education; Nursing Leadership and Administration				MSN	
Nursing					DNP	
Paramedic (see Emergency Medical Technician)						
Peace Officer Standards & Training (POST)		TC				
Personal Training		PC				
Philosophy						M
Physics				BS		M
Political Science				BA		M
Process Systems Technology	Note: AAS program inactive		AAS			
	Specializations: Control Systems Technician; Electronics Technician	TC				
Psychology	Concentrations: Counseling Psychology; Psychology			BA		M
Public Administration/ Public Safety	Note: Inactive program.			BAS		
Public Safety Diving		TC				
Radiologic Sciences				BSRS, BAS		
	Computed Tomography; Magnetic Resonance Imaging	PC				
Social Sciences					GC	
Social Work				BSW		M
Sociology				BA		M
Spanish	Concentrations: Applied Professional Spanish (Note: Inactive); Hispanic Studies			BA		M
	Secondary Education Licensure (see Teacher Education below)			BA		
Speech						M

PROGRAMS OF STUDY		LEVEL OF AWARD				
		Certificate	Associate	Baccalaureate	Graduate	Minor
Sport Management			AS	BS		M
Statistics				See Mathematics		M
Studio Art				BA		M
Supervision		TC				
Surgical Technology			AAS			
Sustainability Practices		PC				
Sustainable Agriculture			AAS			
Teacher Education: Students must complete degree requirements in one of the following programs of study in addition to required coursework through the Center for Teacher Education for initial licensure:						
Early Childhood Education: Early Childhood Special Education (BA); Director (TC); Entry-Level Teacher (TC)						
Elementary Education: Liberal Arts (BA) Concentrations: English, Mathematics, Social Science						
Secondary Education: Biology (BS); English (BA); History (BA); Mathematics (BS); Geosciences (BS); Spanish (BA)						
K-12 Education: Art (BFA); Kinesiology (BA); Music (BME)						
Initial Teaching Licensure: Elementary; Secondary: Requires education coursework in addition to leveling courses					GC	
	Cognates: Applied Mathematics; Educational Leadership; English for Speakers of Other Languages; Exceptional Learner; Initial Teacher Licensure; Rhetoric and Literary Studies; Social Sciences; Teacher Leader				MA, GC	
Theatre Arts	Concentrations: Design/Technology; Theatre (General)			BA		M
	Concentrations: Acting/Directing; Music Theatre			BFA		
Transportation Services	Emphases: Advanced Automotive Service Technician; Diesel Technology		AAS			
	Specializations: Light Duty Automotive Technician; Automotive Service Technician; Diesel Mechanics; Light Duty Foundations I; LIght Duty Foundations II	TC				
Visual Communications	3D Animation Technology	TC	AAS			
Viticulture and Enology	Enology; Viticulture; Wine Professional	TC	AAS			
Water Quality Management			AAS			
	Advanced Wastewater Treatment; Advanced Water Treatment; Distribution and Collections Systems; Introduction to Wastewater Treatment; Mathematics in Water Quality; Small Systems; Wastewater Distribution and Treatment; Water Distribution and Treatment	TC				
Watershed Science						M
Wildland Fire Management			AAS			
Women's and Gender Studies						M

PC=Professional Certificate; TC=Technical Certificate; GC=Graduate Certificate
Learn more about programs of study available at Colorado Mesa University at **coloradomesa.edu/academics**.

Undergraduate Admission Information

Contact: Admissions Office, Colorado Mesa University, 1100 North Avenue, Grand Junction, CO 81501-3122
Call toll free 800.982.6372 or 970.248.1875

Undergraduate Admission Procedures for Degree-Seeking Students

How to Apply

To be considered for admission, undergraduate applicants should:

1. Submit the Application for Undergraduate Admission along with a $30 non-refundable application processing fee or fee waiver documentation.

Prospective students are highly encouraged to submit applications electronically via the Colorado Mesa University website at coloradomesa.edu/apply. Upon receipt of a completed admissions application and supporting documentation, applicants will be notified of their admissions status via the mail and by email.

Students may submit their application for the following terms as early as:

Spring semester 2018: ..... May 1, 2017
Summer semester 2018: ..... August 1, 2017
Fall semester 2018:.....August 1, 2017

2. Submit the appropriate supporting documentation, as outlined in the table on the following page, directly to: Colorado Mesa University, Admissions Office, 1100 North Avenue, Grand Junction CO 81501-3122. Letters of recommendation and a personal essay are optional and should be submitted to the Admissions Office.

Students who do not submit ACT or SAT test scores will be considered for admission into the two-year division of Colorado Mesa University, Western Colorado Community College. If the ACT or SAT is more than three years old, or no ACT or SAT is submitted, the student will be required to complete the ACCUPLACER assessment for math, reading and English placement. Acceptable ACCUPLACER scores cannot be more than three years old. ACCUPLACER is administered by the university's Testing Center. For questions regarding ACCUPLACER, please call the Testing Center, 970.248.1260. If you feel your placement does not reflect your skill level, contact the Advising Center at advising@coloradomesa.edu or 970.248.1177 or LHH 127. For more information on placement policy and options, visit **coloradomesa.edu/testing/first-semester-assessments**.

Home-schooled students should provide a transcript evaluation form (available in the Admissions Office) or a transcript of all courses taken at the high school level. Students should submit transcripts of any courses taken at a traditional high school and may also submit a portfolio to describe their high school education.

Transfer students to Colorado Mesa University should contact the Center for Transfer Services, within the Admissions Office, for help with the admissions and evaluation processes. Transfer students may be admitted into most baccalaureate degree programs if they are in good standing at another regionally accredited college or university and have a total minimum cumulative grade point average (GPA) of 2.4 for 24 or more college level semester credit hours. In calculating the cumulative admission grade point average, Colorado Mesa University

Admission of First-time Freshmen and Transfer Students to Colorado Mesa University

	STUDENT CATEGORY								
	First-time Freshman		Transfer Students						
			0–12 Credit Hours			13–23 Credit Hours		24+ Credit Hours	
STUDENT DEGREE INTENT	Official High School Transcripts, including GED [1]	Standardized Test Scores (ACT or SAT)[8]	High School Transcripts	Official College Transcripts [7]	Standardized Test Scores (ACT or SAT)	High School Transcripts	Official College Transcripts [7]	Official College Transcripts [7]	Transfer GPA
Four-Year Degree-Seeking	Required; sent directly to university from high school. High School grads >= Spring 2008 must meet HEAR requirements	Required; sent directly to university by testing organization [6]	Required; sent directly to university from high school. High School grads >= Spring 2008 recommended to meet HEAR requirements	Required; sent directly to university from previously attended institution(s)	Required; sent directly to university by testing organization [6]	Required; sent directly to university from high school. High School grads >= Spring 2008 must meet HEAR requirements	Required; sent directly to university from previously attended institution(s)	Required; sent directly to university from previously attended institution(s)	2.40
Two-Year Degree-Seeking (AA, AS)	Required; sent directly to university from high school	Recommended; sent directly to university by testing organization [3]	Required; sent directly to university from high school	Required; sent directly to university from previously attended institution(s)	Recommended; sent directly to university by testing organization [3]	Not required	Required; sent directly to university from previously attended institution(s)	Required; sent directly to university from previously attended institution(s)	2.00 [4]
Two-Year Degree-Seeking (AAS)	Required; sent directly to university from high school	Recommended; sent directly to university by testing organization [3]	Required; sent directly to university from high school	Required; sent directly to university from previously attended institution(s)	Recommended; sent directly to university by testing organization [3]	Not required	Required; sent directly to university from previously attended institution(s)	Required; sent directly to university from previously attended institution(s)	No minimum
Certificate-Seeking	Required; sent directly to university from high school	Recommended but not required	Required; sent directly to university from high school	Required; sent directly to university from previously attended institution(s)	Not required	Not required	Required; sent directly to university from previously attended institution(s)	Required; sent directly to university from previously attended institution(s)	No minimum
Non-Degree-Seeking	None [2]	Not required [5]	None [2]	Not required	Not required	Not required	Not required	Not required	No minimum

[1] Preliminary transcript will be accepted until final transcript is submitted; also applies to home-schooled students.

[2] Must become degree-seeking by no later than completion of 30 credit hours and complete high school diploma or GED.

[3] May be required for admission to selected programs; will be required for placement in essential learning courses.

[4] Students who left their previous institution(s) and were not in good academic standing must earn a minimum 2.00 GPA during their first semester.

[5] Placement tests or prerequisites may be required.

[6] 92 or higher index score is required.

[7] Include transcripts of college courses completed while still in high school.

[8] CMU will super score multiple test scores for admission and scholarship determination.

Note: In addition to requirements shown above, some academic programs have additional admission requirements. Admission to Colorado Mesa University does not guarantee admission to those programs.

will compute a transfer GPA based on prior college transcript(s). If the student has attended more than one prior institution, the GPA of each is combined for a total cumulative admission GPA. For students seeking a baccalaureate degree, with less than 24 transfer credit hours, it is recommended they meet HEAR requirements as outlined in the HEAR section of this catalog.

Transfer students who are on probation or suspension from another college or university, or have a cumulative grade point average of less than 2.4, will not be admitted into a baccalaureate degree program but may enroll in Western Colorado Community College. Transfer students who are on probation or suspension from another college may be placed on probation at Colorado Mesa University.

An unofficial transcript may be accepted for a conditional admissions decision. Official transcripts must be submitted to the Admissions Office to be considered for full admission per Colorado state wide admissions policy. Failure to provide all official transcripts may result in a reversal of the conditional admissions decision. All official transcripts should be received no later than the midpoint of the first term of attendance. A registration hold will prohibit registration for future semesters and will be removed once all official transcripts are received. To be considered official, the transcript must be sent directly from the previous institution to Colorado Mesa University.

An official evaluation of transfer courses is made once the student is admitted. Credit evaluations are completed in the Registrar's Office, with the assistance of academic department heads.

Returning students (any student who has previously attended Colorado Mesa University and has been out for at least two semesters; summer and January terms excluded) must submit an online application at coloradomesa.edu/apply or a paper application obtained from the Registrar's Office. If the student has attended another institution since last attending Colorado Mesa University, official transcripts of all course work must be sent directly to Colorado Mesa University, Registrar's Office, from each institution attended. Official transcripts must be submitted to continue enrollment at Colorado Mesa University. See "Applicable Catalog and Degree Requirements" section to determine the catalog to be followed for graduation.

Students who are eligible to return after being on suspension must complete the Returning Student Application to be considered for re-admission. See the Academic Suspension section.

International students (any student who has or will be seeking an F-1 or J-1 student visa) should contact the International Student Admissions and Programs office for assistance with the admission process. See pages 18-19 for further information.

Admission Decisions

Students who are academically prepared may be admitted to either the university's four-year or two-year divisions, according to the student's degree intent. Admission to the university's four-year division, however, does not guarantee acceptance of a student into a specific course or academic program (i.e., admission to the university does not imply entry into any program which has selective admission standards). Some students may be required to enroll in special courses for correction of academic or other deficiencies before further consideration is given.

Applicants applying for enrollment in Western Colorado Community College, Colorado Mesa University's two-year division, are automatically admitted through the community college's open admission policy. Students may later request transfer into a baccalaureate degree program after successfully completing a minimum of 24 college level semester credit hours and a cumulative grade point average of 2.4 or better or after earning an associate degree. Students with less than 25 college-level credit hours may also be subject to the Colorado Higher Education Admission Requirements (HEAR). See page 21 for more details regarding HEAR requirements.

Any transfer student admitted to Colorado Mesa University on a probationary status must earn a minimum 2.00 GPA the first semester or be placed on academic suspension and will not be eligible to return to Colorado Mesa University as stated under the academic suspension guidelines.

Colorado Mesa University Baccalaureate Admission Requirements

First-year students who are admitted to Colorado Mesa University's four-year division must meet a minimum index score of 92, as well as the HEAR requirements described in the previous section.

Baccalaureate seeking students with an index of 80-91 may be offered provisional admission provided that they follow a curriculum as tailored by an Academic Success Coach. Students may transition to a baccalaureate program once they complete 13-29 college-level credits at Colorado Mesa University and meet the Colorado Higher Education Admission Requirements (HEAR). In addition, provisional baccalaureate students must earn a grade of C or higher in UNIV 100 and UNIV 101, complete or be eligible to enroll in college-level English and math courses, and earn a 2.4 cumulative grade point average. An alternate pathway is to complete 30 credit hours, earn a grade of C or higher in UNIV 100 and UNIV 101, complete or be eligible to enroll in college-level English and math courses, and earn a 2.4 cumulative grade point average.

GOALS program:
Greater Opportunity for Academic and Life Success (GOALS) is designed for students who do not meet CMU's four-year acceptance index. Academically underprepared students (index scores below 80) may be admitted to Western Colorado Community College in GOALS (UNIV 102), a semester-long course designed to provide students a career and/or college foundation. Students will focus on study skills, time management, research skills and career exploration.

GOALS is a one-year program. Successful students will complete 24 credits with a 2.0 grade-point, or the grade-point average required for entry in a four-year baccalaureate program. Students who do not meet that requirement may enroll in a certificate program, a two-year associates

program or a two-year associate of applied sciences program.

Admission to Specific Undergraduate Programs

Some baccalaureate, associate, and certificate programs may have specific entrance requirements in addition to general university admittance. Admission to Colorado Mesa University does not guarantee admission into an academic or technical program. More information is available in this catalog in the Programs of Study section. Prospective students should check with the department head of the specific academic program for special requirements.

Admission to CMU/CU-Boulder Engineering Partnership Program

Students enter CMU as "pre-engineering" majors. They may apply to the Civil or Mechanical Engineering Partnership Program:

- After one year at CMU if they have completed a two course sequence in calculus and a two course sequence in physical science with As or Bs and have an overal GPA of 3.0 or better, or
- After completing all required lower-division coursework at CMU with a GPA of 3.0 or better

Interested students can learn more about the program and admission options at coloradomesa.edu/engineering.

Acceptance of Transfer Credits from Other Institutions

It is the policy of Colorado Mesa University to accept academic credits from:

1. All public colleges and universities in the state of Colorado, provided they are currently regionally accredited. This applies regardless of the institution's accreditation status at the time the credit was earned.
2. Private and out-of-state colleges and universities, provided the institution is currently regionally accredited and was accredited or was a candidate for accreditation at the time the credit was earned.
3. Regionally accredited two-year community or junior colleges.
4. Regionally accredited institutions that award "S" or "P" grades, if the granting institution states that such grade is equal to a grade of "C" or better.

   Regional accrediting bodies are:

   - Middle States Association of Colleges and Schools
   - New England Association of Schools and Colleges
   - Northwestern Association of Schools and Colleges
   - North Central Association of Schools and Colleges
   - Southern Association of Schools and Colleges
   - Western Association of Schools and Colleges

5. gtPathways, Colorado guaranteed general education transfer courses (see Catalog section on Colorado Department of Higher Education Statewide Guaranteed Transfer Courses).
6. Colleges and universities outside of the United States, provided the institution maintains the equivalent of a regional accreditation and individual transcripts have been evaluated by World Education Services or another NACES-approved member.

Only courses with a grade of "C" or better are eligible to be applied toward a degree or certificate.

Colorado Mesa University reserves the right to evaluate, on a course-by-course basis, any credits earned 15 years or more prior to enrollment. Initially, only courses used to fulfill essential learning requirements will be accepted in transfer. Other courses will be transferred upon acceptance by the department head within the major. Additional transfer polices are available at coloradomesa.edu/registrar/transfer.html.

Advanced Placement and International Baccalaureate Credits

Advanced Placement (AP) or International Baccalaureate (IB) transfer credit may be obtained by students who have successfully completed AP or IB courses and tests while in high school. Information about specific AP and IB courses and credits can be found at coloradomesa.edu/registrar/transfer.html

Additional information about AP and IB is available in the General Academic Policy section of this catalog under Non-Traditional Credit. To receive credit, an official copy of the AP or IB transcripts must be sent directly from the testing agency to the CMU Registrar's Office.

Other Types of Transfer Credit:

Information on the transfer of other types of course credit not outlined above can be found in other sections of this Catalog:

Military credits: refer to the Veterans section under Undergraduate Admission Information.

Technical credits: refer to the requirements for the Bachelor of Applied Science degree under Requirements for Undergraduate Degrees and Certificates.

Transfer of final credits for degree completion: refer to the section on Final Credit Requirements Taken at Another University under Requirements for Undergraduate Degrees and Certificates.

Graduate credits: refer to the section on Transfer Credit under Graduate Programs.

Additional details regarding AP, IB and Military credit can be found in the section on Non-Traditional Credit under General Undergraduate Academic Policies.

International Students

To be considered for admission, students who have or will be seeking an F-1 international student visa must complete and submit the following items to the Colorado Mesa University International Student Admissions and Programs Office at 1100 North Avenue, Grand Junction CO 81501-3122. Students are encouraged to apply by May 1 for fall semester and by September 1 for spring semester:

1. International Student Application with $30 non-refundable application fee;
2. Proof of English proficiency (see next for details);

3. Official secondary school transcript (transcripts not issued in English must be accompanied by official English translations);
4. Official transcript(s) from all colleges or universities attended or an official copy of the professionally evaluated foreign transcript(s);
5. The CMU Notarized Statement(s) of Financial Support and official bank statement(s) showing proof of funds;
6. Copy of ACT or SAT scores (if taken);
7. For registration purposes, all international students are required to maintain health insurance. Students who do not already have coverage will be enrolled in CMU's international student group insurance plan;
8. For registration purposes, all international students are required to comply with the Colorado law regarding the measles, mumps and rubella immunizations. A Colorado Mesa University official immunization form must be completed and returned to the Registrar's Office.

English Proficiency Requirements:

Prospective international students who are seeking admission to Colorado Mesa University and whose primary language is not English, must provide documented evidence of the ability to read, write, speak, and understand the English language. This requirement may be fulfilled in one of the following ways:

1. Submission of TOEFL exam scores with a minimum average of 70 iBT/525 paper-based for undergraduate admission and 80 iBT/550 paper-based for graduate admission.
2. Submission of IELTS exam scores with a minimum of Band 6 for undergraduate admission and Band 7 for graduate admission.
3. Enroll and successfully complete our on-campus intensive English program, BridgePathways® at Colorado Mesa University. See page 33 for details.
4. An international student who has been enrolled as a full-time student at a high school, college or university in the United States may request consideration of fulfillment of this requirement on an individual basis.
5. Other evidence will be considered on an individual basis.

Proof of Financial Funds Information:

Before admission is granted, an international student must provide proof of financial ability to meet the cost of tuition, fees, books, living accommodations, health insurance and incidental expenses for at least one full year.

Costs, additional information, and forms may be obtained from coloradomesa.edu/international.

International Transfer Student Information

International transfer students with college credit from an institution outside the United States must provide the appropriate official, professionally evaluated transcript of courses (or grade reports, exam results, degree awards, etc., depending on the standard of the particular country) before transfer credit can be determined. Please see coloradomesa.edu/international for more information on approved foreign transcription evaluation options. In most cases, course descriptions or syllabi are required to determine content of individual courses. Should a student decide to begin their degree from the beginning at CMU, a professionally evaluated transcript is not required.

Undergraduate Admission Procedures for Non-Degree Seeking Students

Students who do not wish to pursue a degree or certificate at Colorado Mesa University may apply as non-degree seeking rather than being formally admitted to the university. This includes those students who wish to enroll in Colorado Mesa University courses while away from their "home" institution, such as during summer and January terms.

Policies and guidelines include:

1. Applicants must complete the Colorado Mesa University Application for Undergraduate Admission, selecting the non-degree seeking student type, and submit it along with a non-refundable $30.00 application fee.
2. Students who do not wish to pursue a degree or certificate are not required to submit high school or college transcripts or test scores.
3. Non-degree seeking students are not eligible for financial aid or scholarships and will not be assigned an advisor.
4. Non-degree seeking students must consistently earn a minimum semester grade point average of 2.00 while enrolled at Colorado Mesa University.
5. Non-degree seeking students who earn 30 semester hours at Colorado Mesa University must apply for admission to Colorado Mesa University as a degree seeking student in order to continue taking classes at Colorado Mesa University.
6. Degree seeking students will have priority over non-degree seeking students regarding registration.
7. Non-degree seeking students are advised that courses taken during non-degree seeking status are counted against the state's current allowance of 145 semester credit hours through the College Opportunity Fund (COF).

Non-degree seeking students have not been formally admitted to Colorado Mesa University and are not guaranteed admission should they later make formal application as degree seeking.

Once non-degree seeking students apply for degree seeking status at Colorado Mesa University, the admission policies in effect at the time of formal application will be used to determine admissibility into the university and general and/or specific academic programs. This includes satisfying all requirements for admission as summarized in the admissions table found earlier in this section.

Immunization Policy for Measles, Mumps, and Rubella

Colorado State Immunization Law states that effective July 1, 1992, all college students born since January 1, 1957 must have two (2) measles, two (2) mumps, and two (2) rubella doses. If the student received a second measles dose prior to July 1, 1992, the second mumps and rubella are not required.

Written evidence of titers (blood tests) showing immunity to measles, mumps, and rubella is acceptable. If the student completes an exemption form and an outbreak occurs, the student will be subject to exclusion from school.

Selective Service

Any male student born on or after January 1, 1960 wishing to attend classes at Colorado Mesa University must attest to his registration or exemption from registration with the Selective Service. This testimony must be done prior to initial registration.

Veterans

Programs offered by Colorado Mesa University, with certain exceptions, are approved by the Community College and Occupational Education System for the education and training of those veterans and dependents of veterans eligible under applicable public laws. If benefit assistance is desired, a veteran or dependent planning a course of training in a special program not described in the university catalog or identified as approved for veteran's benefits should check with the Veteran's Benefits and Services coordinator before enrolling in such a program.

Veterans and dependents who plan to apply for VA benefits while attending Colorado Mesa University should contact Veteran Services in the Registrar's Office as soon as the decision to enroll is made. Application for benefit assistance must be made as soon as possible so that classes can be certified before the first day of class. Without advance application, the student must make other financial arrangements and be prepared to finance tuition and fees, books, supplies, and living expenses until VA funds are received. Further information may be obtained from the Veteran's Benefits and Services Coordinator in the Registrar's Office.

Credit may be granted for experience and training gained during active duty in the armed forces. Students must submit appropriate discharge papers, transcripts, and certificates of completion to the Registrar's Office.

Any Service Member or Reservist who is unable to attend class or must suspend their studies due to service requirements must coordinate with the Veteran's Benefits and Services Coordinator in the Registrar's Office in order to comply with 34 C.F.R. Section 668.18.

Concurrently Enrolled High School Students

Current enrolled high school students may register for college-level classes through four distinct programs as provided through the Concurrent Enrollment Act (CE).

Early Scholars program - Through Western Colorado Community College's Early Scholars Program, high school students may access college-level courses not replicated in the high school curriculum through enrollment on a Colorado Mesa University campus.

High School Scholars program - College-level courses are also taught at participating high schools by qualified and approved high school lecturers for academic programs at Colorado Mesa University.

ASCENT program - Students meeting program qualifications may also enroll through Colorado's ASCENT program if they have completed all high school graduation requirements, will have earned at least 12 college credit hours prior to high school completion, and agree to the special enrollment terms of the ASCENT Program.

Technical Scholars program - Students enrolled in Western Colorado Community College's Career and Technical Education (CTE) high school program can earn college credits through the Technical Scholars program.

To participate in the Concurrent Enrollment Program, students must be currently enrolled in high school (public, private, or home-schooled) and meet all the following in order to be considered (Technical Scholars Program participants are exempt from the requirements below, but must meet other course competency requirements to earn college credit):

1. Minimum 3.0 cumulative GPA;
2. ACT Reading score of 17 or higher;
3. ACT English score of 18 or higher; or SAT verbal score of 470 or higher; and
4. ACT Math score of 19 or higher; or SAT math score of 470 or higher;
5. Approval of high school official.

Note: Students must take the ACCUPLACER assessment if the above tests have not been taken. ACCUPLACER may be scheduled by contacting the Prometric Testing Center at 970.248.1260 at a cost of $17 per section. ACCUPLACER may also be taken through other college testing centers and scores provided to Western Colorado Community College.

In most cases the school district will pay the tuition of the student to concurrently attend Colorado Mesa University or Western Colorado Community College (summer session excluded). Students (or parents or legal guardians if student is a minor) are always responsible for payment of any and all fees, books, and supplies, as well as payment of tuition not covered by the school district. Students must give notice to the high school 60 days before the beginning of the semester they wish to enroll and have all information submitted to the Western Colorado Community College Student Services Office.

Application Process - Early Scholars/High School Scholars programs

All students wishing to enroll in the Early Scholars or High School Scholars programs must be enrolled in high school (or, if home-schooled, be at the junior or senior level). Qualified students must complete and submit the following: Western Colorado Community College application, Concurrent Enrollment Registration Form, current high school transcript, and appropriate test score reports. All Early Scholars or High School Scholars Program students must submit a Concurrent Enrollment Registration form each semester. This form requires completion by the student, lists the desired courses to be taken, and requires the high school official's approval. Early Scholars students (taking classes on one of Colorado Mesa University's campuses) must also submit proof of two (2) measles, mumps, and rubella vaccinations.

Technical Scholars Program

Students may earn college credits through the Technical Scholars Program while enrolled in the CTE high school program at Western Colorado Community College. Students will register for the college credit during the start of the second semester and must meet over 80% of course competencies to qualify for college credit. Students are advised to meet with their WCCC instructors to determine their eligibility.

ASCENT Program

ASCENT stands for Accelerating Students through Concurrent Enrollment. Students who have completed at least 12 credit hours of postsecondary courses prior to completion of his/her 12th grade year may be eligible for the ASCENT Program. They remain students in their Local Education Provider (LEP) for one year following their 12th grade year, and the LEP receives ASCENT specific per-pupil state funding that it uses to pay their college tuition. Students receive their high-school diplomas at the end of their ASCENT year.

The LEP will pay the tuition (up to the maximum provided by the Department of Education) for qualified ASCENT students; however, students are responsible for fees, books, supplies, as well as any tuition not covered by the LEP. Students must indicate their initial interest through their high school counselor in the Fall semester (see school district for deadline and application). Qualified students must complete and submit the following by February 1st to apply for the ASCENT program: Western Colorado Community College application, ASCENT Registration Form, current high school transcript, and appropriate test score reports.

Obligations for Concurrently Enrolled Students

1. Upon course registration, students (or parents/legal guardians if student is a minor) incur a financial obligation to CMU.
2. Students participating in this program must apply for the College Opportunity Fund (COF) stipend. A student not registered for COF is responsible for payment of the COF stipend in addition to any additional outstanding tuition/fee charges.
3. Because Early Scholars/High School Scholars enroll in college-level course(s), participating students must meet the same course requirements as other college and university students.
4. Most courses taken satisfy university graduation requirements. Note that Activities (KINA), and advanced placement courses are not eligible under the Early Scholars/High School Scholars program.
5. High School seniors may take developmental basic skills courses under the provisions of the Concurrent Enrollment program. Grades earned in the Concurrent Enrollment program are part of the student's permanent CMU record and will appear on his/her college transcript; this may affect future university admission and/or scholarship potential.
6. Course credits will transfer only if a student earns a C or better in the course.
7. Students who earn a grade of D or F in any CMU or WCCC course while enrolled in the Concurrent Enrollment program will be financially responsible for repayment of all tuition paid for the course to their school district (if applicable). Further, students earning a grade of D or F while enrolled in the Concurrent Enrollment program will be prohibited from enrolling in any additional courses until they successfully pass the failed course(s) and meet their financial obligations for tuition repayment.
8. If students withdraw from a course after the add/drop date, they will receive a grade of W or F on their CMU transcript and will be responsible for all tuition and fees paid. See official university academic calendar for specific dates.
9. Students participating in this program are not eligible for the following: university activities or sports, and/or federal- or state-funded financial aid, including institutional scholarships funded with general fund dollars.
10. Registration in the Early Scholars/ High School Scholars/Technical Scholars programs does not admit the student into a degree program.
11. Student should check with their local school district regarding specific eligibility and financial obligations.

Colorado Mesa University does not guarantee that the approved classes will be available upon registration. Before registering for a specific course, students must fulfill the prerequisites listed in the Colorado Mesa University catalog. For more information related to the Concurrent Enrollment programs visit coloradomesa.edu/wccc/concurrent.html.

Colorado Public Higher Education Admission Requirements (HEAR)

The admissions policy of the Colorado Department of Higher Education (CDHE) recommends the completion of a precollegiate curriculum for admission to a four-year Colorado public college or university for students graduating from high school beginning 2008.
Transfer applicants with fewer than 24 college-level semester credit hours and students transferring within the same institution must also demonstrate academic preparation comparable to HEAR if they graduated from high school in 2008 or later. Such preparation can be demonstrated by completing the pre-collegiate curriculum in high school and/or by successfully completing (with a grade of C- or higher) a college-level course in each core area (English, mathematics, natural sciences, foreign language and social sciences) where the high school unit requirements have not been fulfilled.

For students who graduated in 2010, or later, high school course or unit requirements include:

- Four years of English
- Four years of mathematics (algebra I or higher)
- Three years of social studies (including one year of U.S. or world history)
- Three years of natural science (two of which are lab-based)
- Two years of academic elective.
- One year of foreign language

Additional details are available from the CDHE website at: highered.colorado.gov/academics/admissions/.

Residency Status for Tuition Purposes

A student's tuition classification is governed by state law. For further information regarding tuition classification, please see the Expenses section of this catalog, or contact the Tuition Classification Officer located in the Admissions Office at 970.248.1958.

Confirmation of Attendance

Admitted students (first-time freshmen and first-time transfers) will receive information regarding the student's "next steps" highlighting important dates, housing information, payment information, student orientation dates, important phone numbers and many other necessary details about enrolling at Colorado Mesa University.

As soon as a student knows that they will be enrolling at Colorado Mesa University, s/he should log in to MAVzone and pay the $50 enrollment confirmation deposit. This deposit will be applied directly towards a student's tuition balance. If the student decides not to attend, please notify the Admissions Office. The deposit will be refunded if the student has withdrawn from all courses for which they registered prior to the end of the add/drop period.

Undergraduate Admission Assessment and Counseling Tests

ACT or SAT

Scores from either the ACT or the SAT are required of all degree-seeking students attending Colorado Mesa University, except in certain cases as detailed below. CMU will super score multiple test scores for admission and scholarship determination. Test scores must be on file in the Admissions Office before official acceptance is granted. Certificate seeking students are not required to have ACT or SAT scores on file but for most certificate programs an alternative assessment test will be required prior to registration. A student's attainment of a certain ACT composite score, or SAT combined score is one of several criteria considered for admission. ACT and SAT test results also are used by the student and advisor as the basis for planning a course of study and as an aid in academic placement. Supplemental academic assistance is provided on a limited basis for those whose test scores indicate weaknesses or deficiencies in certain areas such as English and mathematics. ACT and SAT scores also may be used for scholarship consideration and institutional research. The only exemptions to this admission requirement are for:

1. Students who apply for admission to an Associate or Certificate level program;
2. Students enrolled only in no-credit desired/audit classes;
3. Students who have already earned an associate or baccalaureate degree at another regionally accredited institution;
4. Students who are transferring from other regionally accredited colleges or universities with 24 or more semester hours of credit.

Prospective students are encouraged to take the ACT or SAT during their high school junior or senior year. Transfer students (unless exempt) are required to have their ACT or SAT scores on file in the Admissions Office prior to registration. ACT or SAT scores from a previous college or university are acceptable.

Assessment and Evaluation After Enrollment

Students are required to participate in testing and other programs necessary for evaluation and assessment purposes. Please see the Learning Progress Evaluation section in this catalog.

Acceleration of University Study

It is possible for students to satisfy requirements for baccalaureate degrees in less than the traditional four years (eight regular academic year semesters). Ways of accomplishing this include: enrolling in university classes while a junior or senior in high school; exceeding the normal course load at Colorado Mesa University or elsewhere; challenging by examination courses in which competence has previously been attained; earning credit by testing through the College Level Examination Program (CLEP), DANTES and/or Advanced Placement; obtaining credit for prior learning (competency credit). Additional information may be obtained from the Advising Center, faculty advisors, or the Registrar's Office.

New Student Orientation

All new degree-seeking Colorado freshmen are required to attend a Student Orientation program in order to register for their first semester courses. Although not required, new degree-seeking transfer and out-of-state students are strongly encouraged to attend as well. Information regarding Student Orientation will be mailed to students upon notification of acceptance and also can be found on the Colorado Mesa University website at: coloradomesa.edu/orientation.

For proper academic advising and course placement, new students with low ACT or SAT scores must be assessed with a second instrument prior to a Student Orientation session. The instrument is called ACCUPLACER, and the student's ACT or SAT sub scores determine whether or not ACCUPLACER testing is necessary. To schedule an assessment, or for more information please contact the Testing Center, 970.248.1260.

Students must be admitted prior to attending Student Orientation. For more information, call 970.248.1875.

To register for an orientation program log into your MAVzone account and under the "Next Steps" tab there is a box that is titled "Sign up for an Orientation Session", click on the red check mark that says "register for orientation."

Stampede Welcome Week

Stampede Welcome Week is an opening week program for first time and returning students, beginning the Friday before classes each fall.

New students to Colorado Mesa University are strongly encouraged to participate in the programs offered in order to meet fellow classmates and learn about the University's programs and facilities. Parents of graduating

high school students are encouraged to attend the weekend program, as well as Parents Weekend offered later in the fall. Schedules and information are available at coloradomesa.edu/stampede.

Supplemental Academic Support Courses

The University offers supplemental courses to assist students in the transition to higher education:

Freshman Year Initiative (FYI)

New freshman students are strongly encouraged to enroll in the university's Freshman Year Initiative (FYI) program. Students are registered for UNIV 101 (First Year College Success) to maximize their potential for success in college. For more information, visit coloradomesa.edu/fyi.

Maverick Provisional Program (MVP)

New freshman students admitted at the Provisional Baccalaureate level are strongly encouraged to enroll in the university's Maverick Provisional Program (MVP). Students are registered for UNIV 100 (College Success Skills) to assist students in making a successful transition to college by learning strategies and skills they will need to successfully navigate their first semester. For more information, visit coloradomesa.edu/mvp.

Scholarships and Financial Aid

Contact: Office of Financial Aid, Colorado Mesa University, Lowell Heiny Hall Room 117, 1100 North Avenue, Grand Junction, CO 81501-3122 • Call toll free 800.982.6372 or 970.248.1396.

Overview

Financial aid at Colorado Mesa University consists of a balanced program of self help, scholarships, and grants-in-aid awarded for outstanding academic achievement or outstanding performance in special skill areas including vocational skills, athletics, drama, music, etc. Colorado Mesa University also participates in federal and state programs of grants, loans, and student employment, the awarding of which is based primarily on need as determined by a need analysis system approved by the federal government. The application used to determine need is the Free Application for Federal Student Aid (FAFSA.)

Financial aid awards that are based on the need analysis system consider family resources as the primary source of funding for education, with federal and state sources considered secondary and supplemental. Because prospective students always apply for more financial aid than there is money available, the following priority order is used:

1. As stated in federal law, a parent is primarily responsible for payment of educational expenses of a dependent child. Thus, parents of students attending college are expected to make every effort to assist the student financially.
2. The student, as the benefactor of the educational experience, is the next most responsible person for payment of educational expenses.
3. The third level of responsibility is from outside sources such as communities, clubs, corporations, etc.
4. The last resort is federal and state financial aid programs. There has never been enough funding to assist all needy students. Therefore, students should make every effort to obtain assistance at one of the three levels listed above.

Accurate and timely information from the student and parents to the Financial Aid office is the responsibility of the student. Failure on the part of the student to supply accurate information on the application may result in reduction or total loss of aid.

Scholarships

Scholarships represent an effort by the state of Colorado and Colorado Mesa University to recognize resident and non-resident students for outstanding achievement in academic and talent areas. Although need is not a factor in determining recipients, students who are awarded a scholarship are also encouraged to submit a financial aid application.

After students have been admitted to Colorado Mesa University, they will automatically be reviewed for academic scholarship awarding. For more detailed information on academic scholarships, please call the Admissions Office at 970.248.1875 or the Financial Aid Office at 970.248.1396. For detailed information regarding talent scholarships, please contact the appropriate academic department.

Colorado Student Aid Programs

Programs are available to full-time, half-time and part-time students with priority given to full-time students.

1. **Colorado Grants**—Grants are awarded to Colorado resident students on the basis of documented financial need. Financial aid packages which include Colorado Grants may not exceed the documented financial need of the student.
2. **Colorado Work-Study**—The Work-Study program is designed to provide employment on campus for students with documented need and

who meet the residency requirement for tuition purposes.

CMU Foundation

The Colorado Mesa University Foundation is a non-profit organization governed by a Board of Directors. The board is comprised of talented and successful business and community leaders who recognize the University's pivotal role in the future of our state and wish to aid deserving students at Colorado Mesa University. This group, which functions independently of the University, raises funds for scholarships, student loans, and a variety of programs that enhance opportunities provided by the University. In addition, the foundation serves as a receiving and distribution agency for many established scholarships available to the students at Colorado Mesa University.

Private Scholarships—In addition to institutional scholarships, many scholarships and awards have been established for students of the University by individuals and organizations who recognize the importance of Colorado Mesa University to the community and have a connection to the University. The amounts of the awards vary, but all are designed to apply toward tuition and fees. Contact the Financial Aid Office for additional information.

Federal Student Aid Programs

1. **Federal Pell Grant Program**—This is a grant program available to financially needy students enrolling in an eligible institution of post-secondary education.
2. **College Based Programs**—Colorado Mesa University participates in many other federal need-based student-aid programs. These include the (1) Federal Perkins Loan Program, (2) Federal Supplemental Educational Opportunity Grant Program, (3) Federal Work Study Program. Funding is awarded per federal guidelines and on a first-come, first served basis.
3. **Federal Direct Loan Program**—This is a loan program consisting of the Federal subsidized and unsubsidized Stafford Loan Program and the Federal Parent Loan for Undergraduate Students (PLUS). Details concerning these programs may be obtained from the Financial Aid Office or on the Colorado Mesa University website.
4. **Federal Teach Grant**—This is a grant awarded to students in exchange for teaching service. Details concerning this program may be obtained from the Financial Aid Office.

General Guidelines

Financial need for educational expenses is an essential requirement to qualify for assistance from most programs. Both full-time and less than full-time students will receive consideration.

Since financial need is the primary requirement for determining eligibility for assistance under any of the federal student aid programs, Colorado Mesa University requires that the student applicant submit the FAFSA to the federal processor as soon as possible after October 1, 2017. FAFSA on the Web is available at fafsa.gov.

Federal Direct Stafford Loans are initiated with the FAFSA application but require that a Master Promissory Note and Entrance Loan Counseling be completed for first-time borrowers at Colorado Mesa University. Electronic links for these processes are found at coloradomesa.edu/finaid.

Students must maintain satisfactory academic progress as noted with the award notification to remain eligible for financial aid.

Western Undergraduate Exchange (WUE)

The Western Undergraduate Exchange (WUE) tuition program allows students from 14 western states to attend Colorado Mesa University by paying 150% of the cost of in-state tuition instead of out-of-state tuition. Students who are residents from the states of Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming are considered for the award; however, acceptance into WUE is not guaranteed. To be considered students must submit a completed CMU application, all required transcripts and/or test scores, and a copy of a valid WUE state driver's license. Shortly after admission, students with a minimum GPA of 2.0 and a permanent address in one of the WUE qualifying states will be notified of their WUE status.

All undergraduate degree programs are open to WUE students. New freshman or transfer students (24–105 credits) enrolling for the first time at CMU are eligible for WUE consideration. Currently enrolled students cannot be considered for WUE after enrollment at CMU. Returning students (those sitting out one or more semesters) will be considered on an individual basis. Students with prior bachelor's degrees are ineligible. Through acceptance of the special WUE tuition classification, students acknowledge their intent to maintain their legal domicile in their home state at the time of application. If students desire to change their legal domicile to any other state, including Colorado, they must notify the Tuition Classification Officer in the Admissions Office. At that time a student may be changed to out-of-state for tuition purposes. Please note that time accrued while participating in the WUE tuition program cannot be used to establish domiciliary intent for purposes of claiming Colorado residency. To maintain WUE program status, students must:

1. be a U.S. citizen or permanent resident of the U.S.;
2. be enrolled in consecutive fall and spring terms registering in a minimum of 12 credits each semester. Summer term requires six credit hours;
3. maintain a minimum 2.0 CMU GPA each academic year; and
4. remain a permanent resident of your home WUE state (maintaining your home state driver's license will be required).

For more information please contact the Admissions Office at 970.248.1958.

Mountains and Plains (M&P)

The Mountains and Plains (M&P) tuition program allows students from

eleven states to attend Colorado Mesa University by paying 150% of the cost of in-state tuition instead of out of state tuition. Students who are residents from the states of District of Columbia, Delaware, Illinois, Indiana, Iowa, Kansas, Maryland, Michigan, Minnesota, Missouri, Nebraska, Ohio, New Jersey, New York, Oklahoma, Pennsylvania, Texas, Virginia and Wisconsin are considered for the award; however, acceptance into M&P is not guaranteed. To be considered students must submit a completed CMU application, all required transcripts and/or test scores, and a copy of a valid M&P state driver's license. Shortly after admission, students with a minimum GPA of 2.5 and a permanent address in one of the M&P qualifying states will be notified of their M&P status.

All undergraduate degree programs are open to M&P students. New freshman or transfer students (24–105 credits) enrolling for the first time at CMU are eligible for M&P consideration. Currently enrolled students cannot be considered for M&P after enrollment at CMU. Returning students (those sitting out one or more semesters) will be considered on an individual basis. Students with prior bachelor's degrees are ineligible. Through acceptance of the special M&P tuition classification, students acknowledge their intent to maintain their legal domicile in their home state at the time of application. If students desire to change their legal domicile to any other state, including Colorado, they must notify the Tuition Classification Officer in the Admissions Office. At that time a student may be changed to out of state for tuition purposes. Please note that time accrued while participating in the M&P tuition program cannot be used to establish domiciliary intent for purposes of claiming Colorado residency. To maintain M&P program status, students must:

1. be a U.S. citizen or permanent resident of the U.S.;
2. be enrolled in consecutive fall and spring terms registering in a minimum of 12 credits each semester. Summer term requires six credit hours;
3. maintain a minimum 2.5 CMU GPA each academic year; and
4. remain a permanent resident of your home M&P state (maintaining your home state driver's license will be required).

For more information please contact the Admissions Office at 970.248.1958.

Tuition, Fees, Residence Life and Student Accounts

Colorado Mesa University reserves the right to adjust any and all charges, including tuition, fees, and room and board, at any time deemed necessary by the Board of Trustees.

Tuition and Fee Schedule

The tuition rates and student fees shown below are for academic year 2017-2018; all rates are subject to change by the University's Board of Trustees. Rates can be found online at coloradomesa.edu/studentaccounts/expenses.html.

A one-time matriculation fee of $135.00 will be assessed. This fee takes the place of add/drop fees, transcript fees, graduation fees, etc.

Examples:

A. Undergraduate who is full-time, in-state, COF-eligible
(Note: 12 credit hours is full-time for financial aid purposes. COF availability and amounts are subject to change by actions of the Colorado General Assembly.)

Per Semester	
Total tuition for 12 credit hours each term	$4,164.00
Less COF (state's share of tuition)	-$924.00
Equals student's share of tuition	$3,240.00
Plus general purpose student fees	$348.96
Equals total due from student	$3,588.04

B. Undergraduate who is full-time, out-of-state, non-COF-eligible
(Note: 12 credit hours is full-time for financial aid purposes)

Per Semester	
Total tuition for 12 credit hours each term (= student's share of tuition)	$8,364.00
Plus general purpose student fees	$348.96
Equals total due from student	$8,712.96

C. Undergraduate who is part-time, in-state, COF-eligible

Tuition per credit hour	$347.40
Less COF per credit hour (state's share of tuition)	-$77.00
Equals student's share of tuition	$270.00
Plus general purpose student fees	$29.08
Equals total due from student per credit hour	$299.03

D. Undergraduate who is part-time, out-of-state, non-COF-eligible

Tuition per credit hour (= student's share of tuition)	$697.00
Plus general purpose student fees	$29.08
Equals total due from student per credit hour	$726.08

E. Graduate student who is in-state

Tuition per credit hour
Plus general purpose student fees
Equals total due from student per credit hour

F. Graduate student who is out-of-state

Tuition per credit hour
Plus general purpose student fees
Equals total due from student per credit hour

Graduate tuition and fees vary by discipline. Visit coloradomesa.edu/studentaccounts/expenses.html for more information.

Tuition and Fees

Tuition and fees for the 2017-2018 academic year are current as of the time that this catalog was printed. Students should check the University's website for the most current rates and information. Note that summer term pre-registration is held at the same time as pre-registration for fall term and follows a separate policy regarding refunds.

Student Liability for Tuition and Fees

As agreed upon in the Student Financial Responsibility Agreement upon registration, students (or parents or legal guardian if student is a minor) incur a financial obligation to Colorado Mesa University. Anyone who registers for one or more classes is expected to pay the full amount of tuition and fees, unless they officially withdraw by the specified deadlines listed at coloradomesa.edu/registrar/reginfo. Students are responsible for payment of all incurred charges on student accounts. All charges are due and payable on the first day of class. A 1% service charge will be assessed each month on all outstanding balances. All accounts are subject to a one-time 25% late fee up to $100.00 in addition to service charges. No student will be allowed to register for classes, graduate or receive transcripts until their account is paid in full.

Students are liable for additional late fees and/or collection fees and costs, including attorney fees and other charges necessary for the collection of any overdue financial obligation incurred by the student.

Student financial information is available on the Colorado Mesa University website. If you have any questions, contact the Office of Student Accounts at 970.248.1567.

NOTE: Students should consult the Financial Aid Office regarding the eligibility of undergraduate and graduate certificates for financial aid funding.

Other Fees and Expenses

Books and Supplies

Required course materials and supplies are sold at the university bookstore, located in the University Center. Other items sold at the bookstore include general books, art supplies, basic school supplies, calculators, imprinted clothing, backpacks, computers and gift items.

The bookstore offers course materials in a variety of formats, including new texts, used texts, rentals and digital materials or e-books. Not all titles will be available in all formats, but many titles are available in multiple formats. Prices will vary depending on format. The estimated cost of course materials is $125-$150 per course. Supply costs vary depending upon student preference and course requirements.

The bookstore buys unwanted books for cash on a daily basis, as well as conducting larger buyback events during Finals Week of Fall and Spring semesters.

Students may charge bookstore purchases to their student account via the MAVcharge program. This program is available for a limited time at the start of each semester, and credit limits are based on enrollment status. Details on this program, and other payment options are listed on the store website.

Application, Evaluation, and Other Charges

Non-refundable fees:

Undergraduate Application $30.00

Graduate Application $50.00

Matriculation Charge. $135.00

Housing Application Charge . . . $25.00

Other charges:

Room Reservation deposit . . . $125.00
Enrollment deposit $50.00

Parking Permits:

Commuter $110.00
Day Permits $3.00
Faculty/Staff $110.00
Motorcycle $20.00
Pay Lots $1/hour
Reserved $300.00
Residence Hall $135.00
Value Lots. $50.00

Permits are valid for a full academic year.

Course-Specific Fees

When private and special instructional services are required, additional charges will be incurred by the student. Fees vary with the nature of the instruction. Private instruction in applied music is available from instructors approved by the university. Cost of this instruction is regular per credit hour tuition plus a specified amount for one thirty-minute lesson each week. Other special instructional services and courses that may require students to pay extra fees include labs, program-specific fees, courses with transportation fees for field trips, locker and towel facilities and kinesiology classes such as skiing and snowboarding.

Student Health Insurance

CMU works with local health insurance companies to secure discounts for students. The student must contact the provider directly for prices, payments, and claims. Student health insurance rates change each semester. Rates are established by the insurance providers and vary based on coverage selected. Contact information for health insurance providers can be found on-line at coloradomesa.edu/studentaccounts.

Personal Technology Recommendations

Colorado Mesa University recognizes the importance of computers as educational tools to be used in the pursuit of higher education. Students are strongly encouraged, to the extent possible, to have a personal computer for their use while attending Colorado Mesa University. Wireless connectivity is available throughout the campus in all buildings, classrooms, and common areas. Wired and wireless access to the Internet are provided in all residence halls.

Students who will be purchasing a personal computer, and peripherals, should consider the following recommendations.

Hardware: systems with higher processing power and greater quantities of RAM will improve performance and extend the usable life of the system. Students majoring in computer intensive, academic programs of study, such as Mass Communication, Graphic Design, and Engineering, are encouraged to consult with their department before purchasing a computer. These types of academic programs may require computers with higher end specifications to support the software used.

Desktop versus laptop/tablet: desktop computers are generally less expensive than laptops or tablets of comparable computing power. However, portability and wireless connectivity can make laptops or tablets a preferred choice as a desktop replacement or second computer.

Printer: for black and white printing, laser printers are more cost effective than ink jet printers in terms of toner/ink cost per page. Generally, ink jet printers are an acceptable choice for low volume color printing. Students should also be aware of MAVPrint, CMU's campus printing system which provides for printing in residence hall labs, computer labs, and the Library.

Software: students may be required to purchase specific software for specific courses. In some cases, students will purchase software along with the textbook used for a given class at a nominal cost. Students should not purchase software until advised by instructors.

More information regarding personal technology and support can be found online at www.coloradomesa.edu.

Refunds of Tuition and Fees

Refunds are based on withdrawal dates and vary each semester. Please see coloradomesa.edu/studentaccounts for more information.

Tuition Adjustment for Course Changes

Tuition and course fees are reversed for students who complete a Total Withdraw request prior to the first day of the term. Once the term starts, the student is liable for tuition and course fees regardless of attendance. Adding and dropping courses within the published deadlines will result in adjustments to tuition and fees to reflect the student's updated course schedule. Total Withdraws between the first day of the term up to the course

drop dates reverse tuition and course fees for all dropped courses except a $225 partial tuition assessment. Withdrawing from a course after the drop deadline does not adjust tuition and course fees. Students must officially add, drop, or withdraw from courses as noted in the Registration Policies section in this catalog. It is the student's responsibility to seek guidance on how a change to their course schedule affects Financial Aid disbursements prior to making any changes.

Student Financial Counseling

If students need assistance with payment arrangements, financial planning and financial management, please contact Student Financial Counseling at 970.248.1151, Lowell Heiny Hall, Room 101

Matriculation Fee for New Undergraduate, Transfer, and Graduate Students

First-time students to Colorado Mesa University will be assessed a one-time, $135 matriculation fee in addition to the published tuition and fees for the courses unless they are accepted as non-degree seeking at Colorado Mesa University. This fee covers add/drop, career placement, credential (resume) services, graduation (petition) and transcripts.

College Opportunity Fund

The State of Colorado allocates money for Colorado in-state undergraduates to help offset the total tuition of their college education. The state's share of in-state tuition—paid from the College Opportunity Fund (COF)—is available for students once the student signs up for a COF voucher account and authorizes their Colorado Mesa University registration. The funds for the COF voucher will be sent directly to the institution. Students are then responsible only for their remaining share of total tuition.

Most in-state undergraduates qualify for participation in the program. Qualifications and the amount of the voucher are subject to actions by the Colorado General Assembly. Additional details are available on the Colorado Mesa University's website at coloradomesa.edu/cof.

To create a COF voucher account, a student must register at cof.college-assist.org and provide a limited amount of information. Note that the process of creating a voucher account is separate from applying for admission to Colorado Mesa University and can be completed at any time prior to enrolling. Qualifying students who do not establish an account into which the voucher can be deposited are responsible for both the state's and the student's share of tuition.

Residence Life and Dining

On-campus living offers many advantages and choices. The location makes class attendance and activity participation very convenient for Colorado Mesa students. In addition, living on campus relieves the students of many time-consuming responsibilities that enable them to devote more energy to their studies, recreational activities, and making new friends. The many living options we offer help create different opportunities and experiences for you, the student.

Grand Mesa Hall

Each residence hall is staffed with an Area Coordinator or Residence Hall Coordinator, as well as Resident Assistants who are trained to help students. Staff members support the educational mission of the University by helping residents adjust to college life, offering social and educational activities, explaining policies, answering questions, and acting as resources.

Residence Hall Choices

There are several choices of on-campus housing available:

1. Five traditional residence halls which require a meal plan (most rooms are designed for double occupancy, although there are a limited number of single rooms).
2. Two suite style residence halls with four people per suite that share one bathroom. These halls require a meal plan;
3. Two suite style residence halls that house 2-8 people in a mixture of single, super single and double bedrooms—along with sharing two bathrooms and a living area. These halls require a meal plan;
4. Three apartment complexes, available for sophomores, juniors, and seniors. This gives you the true apartment feel, while being on campus and close to everything at Colorado Mesa University.

Residence Hall and Dining Contract

Students applying for accommodations on campus are required to submit a $125 deposit and $25 process fee with their signed contract and completed application. On-campus housing is not guaranteed, as availability is limited to approximately 2,513 students. Fall housing applicants will be placed using our auto-assign process until opening day.

The Residence Hall and Dining Contract is a legal agreement between the student and Colorado Mesa University regarding housing and meal plans on campus. The contract is in effect for the entire time with Residence Life (generally, a two year span). These services, however, are billed and payable by semester. The schedule for room and meal plan refunds is outlined in the contract.

Residence Requirement

First-year and sophomore students who are under 21 years of age and not residing with their parents in Mesa County are required to live on campus. Priority is based on the date the complete Residence Hall application and deposit are received by Residence Life. A student may qualify for exemption from the on-campus requirement for definite reasons expressed in writing and approved by Residence Life. Reasons include:

1. Married; or
2. 21 years of age or older; or
3. A part-time student (enrolled for less than 12 hours per semester); or
4. Residing at the permanent address of his/her parents or step-parents within Mesa County; or
5. Of junior class standing as of the beginning of the semester; or
6. Not of junior standing, but has lived in the Colorado Mesa University residence halls for four semesters; or
7. Medically accommodation the University is not able to satisfy with its available on-campus options (written documentation required); or
8. Placed on a waiting list due to limited space on campus.

Questions concerning housing on campus should be directed to Residence Life at 970.248.1536 or email reslife@coloradomesa.edu.

Off-campus Housing

The university and Residence Life do not manage off-campus housing placements but attempts to assist students in locating housing. "Almost Home" is a Grand Junction community service for listing rental properties and roommate exchange. The listings are posted at catholicoutreach.org. Properties are not religiously affiliated.

Campus Dining

Campus Dining Services offers food service to students at Colorado Mesa University which includes a choice of two meal plans (prices are per semester):

Plan A Unlimited meals between 6:45am and 8:00pm with $150 in MAVmoney;

Plan B Unlimited meals between 10:30am and 8:00pm with $150 in MAVmoney;

Multiple entrees are served with unlimited seconds. Only two meals are served on Saturday and Sunday (brunch and dinner). Both meal plans have full access to brunch and dinner 10:30am to 1:30pm and 5:00pm to 8:00pm. Saturday night meals are served buffet style. Meals are planned with special needs in mind also, such as for the weight conscious or vegetarian.

Students living in traditional residence hall rooms or suites are required to select a meal plan. Students living in on-campus apartments or living off-campus may, if they wish, purchase meal plans and/ or MAVmoney. Meals are served seven days per week during the academic year with limited meals during short breaks. Commuter students are welcome to purchase any of the resident student meal plans, or try one of our commuter plans. Call 970.248.1742 or the MAVcard Office at 970.248.1059 for more information on dining services.

Room and Board Charges

All rates listed below are for the Fall 2017 semester, per student. A $20 per semester charge will be added to all residents' accounts for a non-refundable activity fee.

Room and Apartment Rates

Meal plan required for all rooms and apartments unless otherwise noted.

*Meal plan optional

Bunting Hall (semi-suite)**:**
Double loft $3,000.00
Double room $3,385.00
Single room $3,600.00
Super single..... $3,900.00

Garfield Hall (traditional)**:**
Double room $2,965.00

Grand Mesa Hall (suite)**:**
Double room $3,340.00
Single room $3,637.50
Super single $3,932.50

Monument Hall (semi-suite)**:**
Double suite $3,150.00

North Avenue Hall:
Suite, double room $3,290.00
Suite, single room $3,550.00
Apartment, double..... $3,625.00*
Apartment, single..... $3,975.00*

Orchard Avenue Apartments:
Double room $3,775.00*
Single room $4,137.50*

Piñon Hall (traditional)**:**
Double room $2,572.50
Single room $3,400.00

Rait Hall (traditional)**:**
Double room $2,150.00
Single room $3,000.00

Tolman Hall (traditional)**:**
Double room $2,150.00
Single room $3,000.00

Walnut Ridge Apartments:
Double room $3,250.00*
Single room $3,775.00*

Wingate Hall:
Double room $2,965.00

Meal Plans

All rates are per semester. Meal plans are available to all students and mandatory for those living in a traditional or suite-style residence hall. Plan A and Plan B each include $150.00 in MAVmoney.

Plan A Unlimited, 6:45am to 8pm
$2,402.50
Plan B Unlimited, 10:30am to 8pm
$2,210.00

Contact Information

Mail: Residence Life
Colorado Mesa University
1100 North Avenue
Grand Junction, CO 81501
Phone: 970.248.1536
Fax: 970.248.1979
Email: reslife@coloradomesa.edu
Web: coloradomesa.edu/residence-life

Residency Status

Determination of Residency Status for Tuition Purposes

Tuition classification is governed by state law (Colorado Revised Statutes, Sections 23-7-101 to 104 and 23-7-105) and by judicial decisions that apply to all public institutions of higher education in Colorado. Colorado Mesa University does not have discretion to make exceptions to state law. Although an individual may be considered a state resident for voting and other legal purposes after being in the state for a short period of time, the tuition law specifies additional requirements for classification as "in-state" for tuition purposes.

Initial tuition classification is determined from information a student supplies on an application for admission to Colorado Mesa University. Failure to completely answer questions may lead to an initial classification of out-of-state for tuition purposes. A student's residency status will be stated within their admissions letter. Students who feel their classification is incorrect should contact the Admissions Office immediately.

Students who are entering a Colorado university **immediately after completing high school** are granted in-state status if they:

- Are a United States citizen
- Graduated from a CO public or private high school (list school)
- Attended a CO high school for at least three consecutive years (must list specific years of attendance)

Students who have earned a GED taken within 12 months of entering college are granted in-state status if they:

- Are a United States citizen
- Successfully completed a GED test (list test date)
- Resided in CO for the three years preceding the proposed first semester of enrollment at a CO college (list specific years of residence)

New students seeking in-state status who are unable to answer either of the above series of questions will need to answer all questions on the residency section of the admissions application. If a student is under the age of 23 and not otherwise emancipated via marriage, having a dependent or having been in military service, then CO statute requires parental information to determine the student's residency status. If the parent(s) are true CO residents per state law, then a student under the age of 23 may be granted in-state tuition based on their parental information as long as the student is not otherwise emancipated as previously mentioned. All questions in the residency section of the admissions application should be answered with parent information in this case.

If a student under the age of 23 is emancipated via marriage, having a dependent or having been in military service, they need only provide their own information (not parent information). If a student is over the age of 23, questions need only be answered with student information (not parent information). Colorado statute requires physical presence (domicile) and intent to be a permanent resident of Colorado a full 12 months prior to the first day of the semester in which the student wishes to be considered in-state.

Students under 23 with no CO Resident Parent

Students under the age of 23 seeking in-state tuition, do not have a parent who resides in CO, and are not otherwise emancipated as outlined above must submit a Residency Petition to request in-state status on their own accord. These students must prove that their sources of income are sufficient to meet their financial needs without any parental assistance for a full 12 month period prior to the term they seek in-state status. In addition, they must prove 12 month's domicile (bodily living) in CO and that all prior state ties are severed and created in CO for that 12 month period. A Residency Petition will require documents be attached as proof.

Changing from Out-of-State to In-State Status

Students who begin classes at CMU with out-of-state tuition may petition for in-state status when they believe they have met all state of CO requirements for such. A Residency Petition may be submitted if: 1) a student is under the age of 23 and their parent is now a CO resident; 2) the student is under 23 and seeking in-state status on their own accord; or 3) the student is over the age of 23 and believe they have now met CO requirements for in-state status. A change in status is NOT automatic after attending CMU as an out-of-state student for one year; a student's way to request in-state status is by submitting a completed, notarized Residency Petition with all requested documents attached. Domicile (bodily living) in CO a full 12 months and intent to be a permanent resident of CO are required. Intent requires severing prior state ties and creating them in CO. Such items include, but are not limited to: driver's license, vehicle registration, voter registration and payment of CO state income tax.

The Residency Petition may be found on our website at coloradomesa.edu//admissions/documents/resPetitionForm.pdf. You may also pick up a copy in the Admissions Office. Completed, notarized petitions with all requested documents attached are to be submitted directly to the Tuition Classification Officer located in the Admissions Office. Please see the stated deadlines for submission of Residency Petitions.

Residency Appeals

Students who do not agree with the decision of their residency petition may appeal the decision in writing within 15 days from the date their denial decision was e-mailed to them. The appeal and any additional documentation should be sent directly to the Tuition Classification Officer located in the Admissions Office. The decision of the Residency Appeals Committee is the final university determination. For further residency related questions, please contact the Tuition Classification Officer at 970.248.1958.

Military Exemptions and Tuition

Certain exemptions for in-state tuition status are available for military personnel if: 1) military personnel is active duty and stationed in CO – copy of orders needed to consider student, spouse, or children in-state without further documentation; 2) Honorably Discharged Veteran – copy of DD-214 reflecting Honorable Discharge or Certificate of Eligibility for veterans affairs benefits.

Service members who do not receive an honorable discharge are not eligible for in-state status under the state statutes or for federal veterans education benefits. These students, may, however, meet Colorado in-state residency requirements outlined in C.R.S. 23-7-103.

Contact the Tuition Classification Officer in the Admissions Office for further details.

Dependents of Military Personnel

Certain exemptions for in-state tuition status are also available for dependents of military personnel if: 1) military personnel is an active duty member of armed forces in CO and is a) stationed in CO or b) was transferred out of Colorado; 2) military personnel is active duty in the state during the student's last year of high school and student intends to enroll in CMU within 12 months of graduating from high school; 3) military personnel is an honorably discharged service member currently living in Colorado, regardless of length of residency; or 4) the honorably discharged service member does not reside in Colorado, but was assigned on permanent or temporary duty in Colorado within the past 12 years.

Citizenship and Tuition Classification

Unless otherwise noted in this section, only US citizens, permanent residents, and a select few Visa holders are eligible to be considered for in-state tuition status. Additionally, students without lawful immigration status may be eligible for in-state status if they meet all criteria through ASSET as outlined in the following paragraph.

Students without Lawful Immigration Status and Colorado ASSET Bill

SB 13-033, otherwise known as the ASSET bill, was signed into law in April of 2013. This bill allows certain students without lawful immigration status to be considered in-state for tuition purposes when all the following criteria are met:

1. Attended a CO high school for a minimum of three years;
2. Graduated from a CO high school;
3. Are admitted to a CO university within 12 months of CO high school graduation; and
4. Have completed the College Opportunity Fund (COF) application process including attached Affidavit.

Students having earned a GED may be considered as long as they also attended a CO high school for a minimum of three years prior to earning their GED, are admitted to the university within 12 months of their GED test date, and have completed the COF application and affidavit. Students who were not admitted to the university within 12 months of their high school graduation or GED test date must prove 18 months physical domicile in CO in addition to the above requirements. Please contact the Tuition Classification Officer in the Admissions Office for further details.

Campus Payment Plan

Colorado Mesa University provides a payment program designed to meet the specific needs of students and parents. Semester charges for tuition, fees and institutional room and board can be paid in monthly or bi-weekly installments, beginning in August (for fall), May (for summer) and in January (for spring). Contact the Office of Student Accounts for more information or visit coloradomesa.edu/epay.

Petition Deadlines

SEMESTER	QUALIFYING CUT-OFF DATE	SUBMIT PETITIONS NO EARLIER THAN…	SUBMIT PETITIONS NO LATER THAN…
Fall 2017	First day of class	June 20, 2017	One week prior to first day of class
Spring 2018	First day of class	November 7, 2017	One week prior to first day of class
Summer 2018	First day of class	March 6, 2018	One week prior to first day of class
Fall 2018	First day of class	June 19, 2018	One week prior to first day of class
Spring 2019	First day of class	November 6, 2018	One week prior to first day of class

Academic and Student Services, Offices, and Activities

Contact: Office of Academic Affairs, 970.248.1881
Office of Student Accounts, 970.248.1567
Office of Student Services, 970.248.1366
Student Life, 970.248.1111
WCCC Student Services, 970.255.2660

Admissions Office

1100 North Avenue
800.982.6372 or 970.248.1875

The Admissions Office serves as the welcome center for prospective students and their families. Among the staff's responsibilities are the recruitment of students and the processing of admissions applications, new student academic scholarships, and petitions for changes to residency classification for tuition purposes. Activities of the University's student ambassadors are also coordinated through this office as well as daily tours.

Advising Center

Lowell Heiny Hall, Room 127
970.248.1177

Advising is available from two sources: the Advising Center staff and the faculty. The Advising Center assists students with undeclared majors; students who have declared majors should meet regularly with a faculty advisor.

Undeclared students are assigned to the Advising Center and must meet with an advisor prior to registration. Academic advisors will assist students in course selection and registration, help students with strategies for academic success, and guide students in career exploration. Students who have decided on a major will be directed to the appropriate academic department. A department's administrative assistant can officially declare or change the student's major/minor, provide a program sheet, and assign the student to a faculty advisor.

Program sheets outline the requirements needed for the degree or certificate program being pursued. Students should work closely with their faculty advisors throughout their program. The purpose of an advisor is to assist in the process of degree completion. It is the student's responsibility to maintain his/her program sheet and to keep it up-to-date as classes are completed. Advisors are not responsible for failure to meet degree requirements.

The Advising Center is committed to assisting students in attaining their educational goals. Services provided are:

- Advising/eAdvising
  - First-semester freshmen
  - Students with undeclared majors
- Assist students in course selection and registration
- Guide students in major exploration
- Interpretation of the LASSI assessment
- Assist students with strategies for academic success

Campus Recreation Services

Hamilton Recreation Center
970.248.1592

Campus Recreation Services is established to provide varied programs and services that will contribute to the health and well-being of the students of Colorado Mesa University. The program educates participants in the responsible use of leisure time by providing an atmosphere that fosters the development of lifelong patterns of recreational activities and opportunities for participation in such activities regardless of age, sex, race, or motor ability. To do so, facilities and resources are designed to provide appropriate environments for participants through the following:

- Offering structured competitive and social opportunities in a variety of individual and team sports (Intramural and Club Sports).

Intramural Sports are free and compete against students within the CMU community. We currently offer indoor and outdoor soccer, indoor and sand volleyball, softball, basketball, ultimate Frisbee, arena and flag football, tennis, racquetball, corn hole, table tennis, disc golf, dodgeball, and battleship.

Club Sports have a membership fee and compete against other institutions. We currently offer basketball, baseball, bass fishing, cycling, disc golf fencing, hockey, lacrosse, rugby, volleyball, soccer, softball, swimming, tennis, table tennis, ultimate frisbee, water polo, kayaking, trap and skeet shooting, rodeo, and alpine and nordic skiing. For more information, contact the club sport office at 970-248-1115.

- Providing access to recreation facilities, equipment, and activities for convenient, informal participation (Open Recreation Program). These facilities include a multi-sport gymnasium, outdoor basketball and sand volleyball courts, cardio machines, free weights, cross-functional Rogue Infinity training rig, TRX suspension training, reinforced medicine ball wall, racquetball courts, climbing wall, and swimming pool.
- Offering structured and non-structured opportunities for improving and maintaining physical fitness (Wellness Program). These opportunities include group exercise classes like yoga and Zumba, wellness assessments, personal training including exercise program prescription, massage therapy, and nutrition counseling.
- Offering students significant opportunities for career development, including the acquisition of leadership, management, and technical skills in all areas of Campus Recreation Services (Student Employment Program).

Career Services

University Center, Room 107
970.248.1404

Career Services provides a variety of services to students and alumni* to assist in attaining their career goals. Services provided are:

- Career Assessments
- Career, Graduate, Teacher and Major Fairs
- Workshops:
  - Resume/Cover Letter
  - Internships/Job Search
  - Interviewing Skills
  - Choosing a Major
- Handshake (job/internship database)
- Optimal Resume (resume builder)

- On-campus Employer Recruiting
- Etiquette Dinners

*Some restrictions may apply.

Educational Access Services

Houston Hall, Room 108
970.248.1856

Support services for students with documented disabilities are available through Educational Access Services, a division of Academic Services. Several services are available, depending upon the documented disability. Services can include, but are not limited to, volunteer note takers, testing accommodations, and textbooks in alternate formats. Prospective students are encouraged to contact the Coordinator of Educational Access Services to discuss accommodations. Students must initiate a request for accommodations by contacting the EAS office. A new request must be made each semester.

Emergency Contact Services

Lowell Heiny Hall, Room 107
970.248.1366

The Office of the Vice President for Student Services, located in LHH 109, is the referral point for emergencies encountered by students. Issues such as messaging for emergencies while a student is in class are determined on a case-by-case basis. It is important to note that the office cannot guarantee a contact with any student due to their highly mobile behavior, but a good faith effort will be made. This service is not for non-emergency situations.

Financial Aid Office

Lowell Heiny Hall, Room 121
970.248.1396

The Financial Aid Office works with students to meet educational expenses through various monetary resources. Depending on a student's qualifications, aid is available in the form of scholarships and grants that do not need to be repaid. Additionally, students can apply for loans that are need- or non-need-based as well as work-study employment.

Intensive English Program, BridgePathways® at Colorado Mesa University

International students who meet all admission requirements except English proficiency can be conditionally admitted to CMU and attend BridgePathways® at Colorado Mesa University, an on-campus intensive English program. The BridgePathways® program features a theme-based curriculum which simulates a university setting, authentic materials written for native-English speakers, critical thinking skills and analysis, and an English-only policy to maximize the learning experience. Students enrolled in the BridgePathways® program may live on campus, have access to campus facilities and are integrated into university campus life.

Upon successful completion of the BridgePathways® program, students are eligible for direct admission to CMU undergraduate programs. Graduate programs may still require a TOEFL or IELTS score for admission.

Intercollegiate Athletics

Maverick Center
970.248.1503

Intercollegiate athletics provides students with equitable opportunities to enhance their education, represent the University, and participate in athletics while developing skills and understanding. All undergraduate students are encouraged to participate in intercollegiate athletics as determined by their interests and capabilities.

Participation in the program, however, is secondary to the academic expectations of students. To this end, it is the responsibility of those administering the program to schedule the length of playing seasons, the frequency of practice sessions, and the number of contests so that they shall not unreasonably conflict with students obligations to attend class regularly, to study, to develop their intellectual, moral, and social faculties, and to graduate from the university as educated men and women. The men's program at Colorado Mesa University includes baseball, basketball, football, golf, soccer, swimming, tennis, lacrosse, cross country, track and field, triathlon and wrestling. Basketball, cross country, golf, beach volleyball, soccer, softball, swimming, tennis, lacrosse, track and field, triathlon and volleyball are available to women.

Colorado Mesa University also offers competitive cheerleading.

International Student Admissions and Programs Office

Rotary Hall • 970.248.1802

The International Student Admissions and Programs Office oversees international student admissions and recruitment, international student services and advising, international initiatives and development, study abroad and the campus-based intensive English program and partnership.

International Student Exchange Program (ISEP)

Rotary Hall • 970.248.1802

Colorado Mesa University is part of the International Student Exchange Program, a worldwide network of over 150 colleges and universities across 52 countries. CMU students who choose the exchange option pay CMU tuition/fees and housing and can apply to spend a semester or full academic year at an ISEP foreign institution. Direct options are also available. Visit isep.org or contact the Office of International Student Admissions and Programs for more information.

John U. Tomlinson Library

970.248.1862

John U. Tomlinson Library supports CMU's mission of exceptional teaching and academic excellence by providing professional librarians, diverse and comprehensive collections, information literacy instruction and assessment, and a variety of services. Librarians provide personalized research assistance to support both faculty and students, and information literacy instruction to help students identify, evaluate, and ethically use information sources within and beyond the Library. Our librarians are available to on-campus and distance learning students, faculty, and staff at our Research Help Desk, by appointment, and by email, telephone, and our 24/7 instant messaging service. The library collection includes over 262,000 books, e-books, and audio-visual materials as well as over 120 databases of academic journal literature. Students, faculty and staff can borrow materials from CMU as well as other Colorado and regional libraries, including several large academic research libraries, with delivery to our Main and Montrose campuses, Western Colorado Community College, and to distance learning students via many Colorado public libraries. Tomlinson

Library is a welcoming, comfortable environment, providing open and reservable study rooms, a 24-hour study space, computers, printing & scanning, IT support, convenient dining and café options, outdoor seating with a fire pit, and much more.

Little Mavericks Learning Center

1060 North Avenue
970.248.1318
Childcare is available for children of Colorado Mesa University students, faculty and staff. The age limit is one year and walking up to five years. Summer programs available for children one year to 12 years old and is open to the community. For further information, contact the Center Director.

MAVcard Student ID

University Center
970.248.1059
The Colorado Mesa University MAVcard is your key to campus services at Colorado Mesa University. The MAVcard can be used at Tomlinson Library, Starbucks, The Point, Hamilton Recreation Center, Juice Junction, Bookcliff Café, the Dining Hall, CMU Bookstore, Sandella's and Jazzman's. It can also be used off-campus at Mountain Grind Coffee Company, Bravo Pizza, Domino's Pizza, MoJos, and The Scramble at WCCC. Your MAVcard is also used to access residence halls and athletic events. The MAVcard can be enhanced by linking to a free Wells Fargo® checking account, allowing free ATM usage, direct deposit, with access to an on-campus customer service branch.

Mentoring Assistance

Albers Hall • 970.248.1765
The Student Services Office provides mentoring assistance for students who are in need of support. If a student is dealing with any issue the Student Services office will provide resources to ensure students success. Mentoring guarantees a student that there is someone who cares about them. A student is not alone in dealing with day-to-day worries and pressures of a University environment. Students who meet regularly with their mentors are 52% less likely than their peers to miss classes. (Public/Private Ventures study of Big Brothers Big Sisters).

National Student Exchange Program

Registrar's Office • 970.248.1813
Colorado Mesa University is a member of the National Student Exchange Program. NSE is a consortium of over 200 colleges and universities in the United States and its territories. Colorado Mesa University students may be able to participate in this program at in-state tuition rates for up to one academic year and receive full credit for course work completed while on exchange. For further information, contact the Registrar's Office or visit coloradomesa.edu/nse.

Office of Student Accounts

Lowell Heiny Hall, Room 130
970.248.1567
Office of Student Accounts is responsible for student billing, collection of tuition, fees and other charges, and refunding excess Financial Aid to Students. We administer various payment options and schedules (such as the campus tuition payment plan) to ensure bills are paid on time without penalty. For detailed information conserning the various costs and fess a student may incur and payment options please visit coloradomesa.edu/studentaccounts.

Office of Student Success

Albers Hall • 970.248.1340
The Office of Student Success (OSS) advises all Provisional Baccalaureate (PB) students. These students fall between the Associate and Baccalaureate admission requirements for acceptance to CMU. The PB program gives students the opportunity to pursue a Bachelor's degree while receiving additional advising and academic support. The primary role of the OSS is to assist the PB students in developing the skills they need to successfully transition to their desired Baccalaureate program.

The PB program takes a holistic approach to ensure student success and is tailored to the individual student through extensive, one-on-one interactions with an academic coach. The OSS has both professional Academic Success Coaches and Peer Academic Coaches who will assist students with all aspects of their academic experience, including helping them successfully transition to college life, improve study skills, schedule courses, and identify majors and careers they are interested in pursuing.

Parking Services

University Center
970.248.1921
Students and University faculty/staff members who wish to park on campus may purchase parking permits for designated areas. A parking permit does not guarantee a parking space, but allows on-campus parking when such space is available. Visit coloradomesa.edu/parking for more information.

Registrar's Office

Lowell Heiny Hall, Room 117
970.248.1555
The Registrar's Office provides a variety of services that include registering students into classes, maintaining academic records, VA benefits and certifying degree requirements for graduation. The office is responsible for processing applications for readmission to Colorado Mesa University, as well as forms to add/drop a class, holds on registration, change of address, non-release of directory information protected by federal law, and enrollment verification for loan or insurance purposes. The office also prepares Colorado Mesa University transcripts and evaluates transcripts from other institutions to determine the number of credits that will apply toward a particular degree.

Student Diversity, Advocacy and Health

Lowell Heiny Hall • 970.248.1754
The Student Diversity, Advocacy and Health office works alongside the office of Student Services to support a diverse student body of Colorado Mesa University. This office specializes in problem solving and helping students to become better informed and grow as adults; whether these decisions involve classes or any other aspect of university life. Student Diversity and Advocacy provides for students and faculty the experience of interacting and learning together to respect a broad range of people from diverse backgrounds. This offers an arena for students to have a greater appreciation and understanding of cultural diversity, and be prepared to take on leadership roles in society. The office manages all student related health issues on campus, and refers students to health service providers.

Student Financial Counseling

Lowell Heiny Hall, Room 101
970.248.1151

If students need assistance with payment arrangements, financial planning and financial management, contact Student Financial Counseling.

Student Life

University Center, Room 212
970.248.1111

There are a number of student fee-funded organizations that are administered by Colorado Mesa University students including the following:

- Associated Student Government (ASG): ASG is the representative body and official voice of the students. The ASG operates through the General Assembly, a legislative body composed of students elected by the student body. Students involved in ASG have an opportunity to gain leadership skills by representing student opinions to the CMU administration and the University's Board of Trustees, and they are responsible for reviewing and administering student fee requests.
- Club Advisory Board (CAB): Many student clubs and organizations exist at Colorado Mesa University. Currently CMU has over 125 active clubs on campus including honor societies, academic club, general interest clubs, fraternities and sororities, faith-based clubs and volunteer and activist clubs, which allow students to meet other students who share similar interests. A list of current active clubs and organizations can be viewed on the Colorado Mesa University website under Student Life.
- Clubs Sports: CMU provides an opportunity for students to compete in club sports with an offering of over 27 sports. For a list of sports, tryouts, and schedules visit the club sports website under Student Life.
- Cultural Diversity Board (CDB): This student organization offers leadership experiences for students and organizes programs to educate students regarding multiculturalism. Member groups include the Black Student Alliance (BSA), Gay-Straight Alliance (GSA), International Student Alliance (ISA), Latino Student Alliance (LSA) and Native American Student Alliance (NASA).
- Intramural Sports: now offering more than 30 different sports IM sports are a fun way to meet people and stay active. Leagues are always forming and run from one day turnements to 8 week competition. Sports range from flag football, softball, racket-ball, battleships and many more.
- MavRides: Provides free safe rides to all CMU student every Thursday, Friday and Saturday nights from 9pm-3am. Call for a ride or volunteer as a driver 970-248-2222.
- Media Organizations: These organizations include the student newspaper The Criterion, the student radio station, KMSA 91.3 FM, the literary and art publication Literary Review, the Campus Design Studio and the Horizon Magazine. Each of these groups is professionally advised by faculty members and utilizes the latest equipment employed in their fields.
- Outdoor Program: This group is CMU's headquarters for outdoor adventure and education. The OP organizes trips and classes including whitewater rafting, rock climbing, and skiing. The rental center is located next to the Residence Life Center. Rent mountain bikes, canoes, kayaks, cross-country skis, backpacks, and other gear.
- Performing Arts Organizations: All CMU students are encouraged to audition to join a musical group, participate in theatre, or be part of a dance performance. Performances in the arts are highly regarded at Colorado Mesa University and are well attended by students and the community.
- Programming Activities Council (PAC): PAC is responsible for Welcome Week Concert, Homecoming and MavFest as well as other entertainment activities including concerts, movies, dances, comedians, hypnotists and speakers. Best of all, everyone of the over 100 yearly events are free for all CMU students.

Student Wellness Center (SWC)

1060 Orchard Avenue, Suite O
970.644.3740

Good health, both physical and emotional, is an important factor in successful college work. It is the goal of the Student Wellness Center to provide competent, accessible and comprehensive health care to all CMU students who have a valid student I.D. card regardless of the number of credit hours carried.

Health Services:
Like your family physician, the SWC provides a source of basic medical assistance for all CMU students. Outpatient health services are contracted with Community Hospital and students are required to pay a $15.00 co-pay for all health services received at the SWC. The primary services provided are: first aid, dispensing of simple medications, assessment and referral to specialty physicians and dentists, providing counsel for personal health problems, simple physicals, screenings and limited lab tests for a nominal fee. Health services are provided by registered nurses, physicians and practitioners in providing a complement of health care. The physician/practitioner provides students with an initial health assessment and evaluation, treats minor illnesses, and refers students for hospitalization or specialized treatment as needed. A registered nurse is available to answer questions and provide medical information.

Behavioral Health Services:
All CMU students are eligible for counseling services for a $5 copay. Referrals can be made through any office on campus and/or students may contact SWC directly to set up an appointment. These services are provided by licensed/certified counselors and are designed to support students in assisting them with any of life's challenges that maybe affecting their academic life.

Empowerment Classes;
These classes are designed to support students in making adjustments to life's transitions and the changes in their lives. These classes are based on Dialectical Behavior Therapy (DBT). It is an evidence-based cognitive-behavioral educational class that focuses on the aspects of mindfulness, emotional regulation, distress tolerance and interpersonal effectiveness.
Behavioral Health Services are provided Monday-Friday from 8am to 8pm.

Hours of Operation:
Monday–Saturday: 8am–8pm
Sunday: Noon–4pm
Schedule an appointment online at yourcommunityhospital.com/

MSCappoint.cfm or by calling 970.644.3740.

Prime for Life Classes (PFL);
These classes are designed to address substance misuse and prevention. The University, which is an active participant in the Mesa County Prevention Policy Board, supports the concepts of proactive prevention as part of the University's overall policy of maintaining a safe and healthy campus. PFL is an evidenced-based, state approved curriculum for substance abuse prevention and is a harm reduction model that focuses on healthy lifestyle choices.

Testing Center
Houston Hall, Room 125
970.248.1260
The Testing Center services include, but are not limited to, examinations required for admission to graduate and professional schools, examinations for proficiency and certification in nursing and teaching, and the credit by examination program. Assessment of academic skills in college level English and mathematics are provided through the center for potential students as well as those who already have been admitted.

Transfer Services
Admissions Office
970.248.1232
The Center for Transfer Services, within the Admissions Office, offers assistance to students transferring into Colorado Mesa University from other institutions. Services include preliminary transcript evaluation, education planning, transition to academic departments, and resolution of transfer problems. Transfer Services staff is available by appointment and for walk-ins. As part of the Admissions Office, the Center works closely with the Registrar's Office to provide students with information about their transfer credits and how those credits may be applied.

TRiO Student Support Services Program
Houston Hall, Room 121A–D
970.248.1492
TRiO is a program designed to help you succeed in college and successfully complete your educational goals of moving from one level of higher education to the next. The program assists enrolled students in a variety of areas including individualized tutoring, academic advising, counseling, financial aid advising, peer coaching, personal financial literacy and career development. To be eligible to apply to TRiO you must plan on finishing a four year degree and be a first generation college student and/or meet income qualifications and/or have a documented disability. TRiO is sponsored by the U.S. Department of Education and Colorado Mesa University. For more information, visit coloradomesa.edu/trio.

Tutorial Learning Center
Houston Hall, Room 113
970.248.1392
The Tutorial Learning Center (TLC) provides free walk-in tutoring for a variety of courses and subjects. Students who would like to improve their writing skills, work through math, science, or other technical concepts, review material for any subject, or get one-on-one assistance and support from other successful students are all encouraged to come to the TLC. Qualified peer tutors, recommended by faculty, are trained to help students with their academic endeavors. The central goals of peer tutors are to help students become more independent with their learning and to create opportunities for student success. Peer tutors accomplish these goals with individuals and small groups by:

1. Offering study tips;
2. Giving feedback on student assignments;
3. Reviewing concepts, types of problems, and rules;
4. Offering encouragement;
5. Helping students follow an instructor's directions and use their textbooks, syllabi, and materials more effectively;
6. Introducing students to self-help and campus resources available to them; and
7. Reinforcing what students already know and understand.

WCCC Student Services
Building B, Room 102
970.255.2660
Student Services staff at Western Colorado Community College are available to assist students with a number of services including; academic advising, registering for classes, conducting campus tours, and answering questions about our one year certificates and two year associate of applied science degrees. Student Services also administers the concurrent enrollment program that allows high school students to take college classes and the GOALS program, an academic support program for CMU.

Western Colorado Community College

Registration Policies and Procedures

Contact: Registrar's Office, Lowell Heiny Hall Room 121, Colorado Mesa University, 1100 North Avenue, Grand Junction, CO 81501-3122. Call 970.248.1555.

John Tomlinson Library

Overview

Once admitted to Colorado Mesa University, a student meets with an academic advisor (see Academic Advising section). Not all courses available in this catalog are offered every semester or every year. Course schedule offerings for each semester, including registration instructions, are available through the Colorado Mesa University website at coloradomesa.edu and in the Registrar's Office. Students may register via MAVzone or in person at the Registrar's Office.

Student Liability for Tuition & Fees

For all students, the act of registration automatically confirms attendance and the student will incur a financial obligation to the University. A registered student is responsible for paying his/her tuition and fees, regardless of whether or not he/she attend classes, unless the student officially withdraws from the University through the Registrar's Office or drops all courses via the web prior to the deadlines published on the Colorado Mesa University website. It is the student's responsibility to make a copy of the schedule reflecting any courses dropped via the web.

Attendance

Students are expected to attend all sessions of each course in which they are enrolled. Failure to do so may result in a lowered grade, exclusion from class at the discretion of the instructor, or an administrative drop for non-attended courses. Students should not assume that non-attendance will result in an automatic drop from a class (see the Student Liability for Tuition & Fees above).

Instructors may drop any student who fails to attend the first two class meetings or fails to participate in an online class. Instructors may also initiate a drop or withdrawal for a student who fails to attend classes regularly. ("Drops" are up to 15% of class elapsed; "withdrawals" are up to the mid-point of the class.) Not all instructors will exercise this option; therefore, a student should not assume that non-attendance will result in an automatic drop from a class.

Administrative drops may be processed as a result of non-attendance in the first two weeks. Faculty will report attendance on affected students via the Satisfactory Academic Attendance System. Students will be notified via their CMU email account if they may be dropped from the course. Tuition, fees, and financial aid will be adjusted according to the credits remaining in the schedule.

Students who receive financial aid and cease attending classes may need to repay all or a portion of their financial aid.

Instructor approval is required in advance if a student wishes to bring an occasional guest (or child) to class, otherwise the person must be enrolled to attend.

Absences

It is the responsibility of the student to arrange in advance with instructors for making up missed classwork, assignments or tests incurred because of a student's participation in required field trips, intercollegiate sports, or other trips. The coach, instructor, or other official whose activities require students to be absent from classes

should give each participating student an "official" roster and schedule of events for the semester or other appropriate time span which may result in classes being missed. The student is responsible for contacting the instructor of each of his/her classes affected at least 24 hours in advance of each class that will be missed.

Absences due to serious illness or strictly unavoidable circumstances may be excused if the instructor in charge of the course is satisfied as to the cause. In the case of an emergency, the student may contact the Office of the Vice President for Student Services, and that office will contact the student's instructors to inform them of the emergency.

Being excused for an absence in no way relieves the student of responsibility for completing all work associated with the course to the satisfaction of the instructor. Being late to a class or leaving a class early is disruptive and is not acceptable except in extreme circumstances or with prior approval of the instructor.

Add/Drops—Schedule Adjustments

Students may make adjustments to their schedules according to specified deadlines and procedures published on the Colorado Mesa University website. Students dropping all of their courses should refer to the Withdrawal section of this catalog.

Withdrawal Procedures

Withdrawal from Individual Classes

Students may withdraw from individual classes (full semester duration, modular, and summer) via MAVzone prior to the start of the session (semester or modular). Once the session has begun, a withdrawal is permitted up to the mid-point of those classes. See the calendar on the Colorado Mesa University website for details. After the session has begun, a Change of Schedule form, properly completed and with the instructor's signature, is required and must be submitted to the Registrar's Office by the deadlines published on the Colorado Mesa University website. Forms are available in the Registrar's Office. Students who officially withdraw from a course prior to the date of mid-semester (see website for specific date) will receive a "W." Students who withdraw after the deadline will automatically receive a grade of "F" except for cases with extenuating, non-academic reasons.

In addition to regular withdrawal from class(es) by the student, an instructor may initiate a withdrawal from his or her class for failure to attend class, failure to turn in assignments over an extended period of time, or for disciplinary reasons. In such cases, the instructor must observe regular withdrawal deadlines.

Emergency or Hardship Withdrawal from Individual Classes

In the case of an event that qualifies as an emergency or hardship, students may request an Emergency or Hardship Withdrawal from an instructor after 50 percent, but before 75 percent of a course is completed. An emergency or hardship situation is defined as a significant, unexpected non-academic circumstance beyond the student's control and is granted at the discretion of the instructor. Failing, poor performance in a course, or other academic-related reasons do not constitute circumstances for an emergency withdrawal.

Students seeking an emergency withdrawal must complete the proper withdraw form, consult the instructor, and return the signed form to the Registrar's Office. Substantiating documentation (e.g., doctor's notes, court documents, death certificates) may be required at the request of the instructor.

Total Withdrawal from the University

Students who desire to withdraw totally from Colorado Mesa University are advised to notify their faculty advisor or the Advising Center prior to obtaining the appropriate paperwork from the Registrar's Office.

Prior to the first day of the semester, students may totally withdraw from Colorado Mesa University by dropping all classes via MAVzone. If a student desires to totally withdraw after the semester has begun, he/she must submit a Total Withdraw form to the Registrar's Office. See the calendar on the Colorado Mesa University website for details. The necessary withdrawal papers must be filled out by the student and officially signed by the appropriate staff. Grades of "W" will be given if done so before the deadline and if all withdrawal procedures have been satisfied for courses in which the student has not already received a grade (including F). Students totally withdrawing after the deadline will receive grades of "F."

Add/Drop/Withdraw Exceptions

Exceptions to add, drop or withdrawal deadlines are rare. To be considered, evidence of substantial and unexpected non-academic circumstances outside the student's control must be provided. To file an Enrollment Appeal, the student must supply a written request explaining the situation along with supporting documentation to the Registrar's Office within six months after the end of the semester being appealed. At the end of the six month period, the registration record is considered final and no further registration or tuition adjustments will be considered. The Enrollment Appeals Committee will review the provided documentation, course feedback from faculty and related enrollment information pertinent to the request. Filing an appeal does not guarantee approval.

Class Waitlists

Automated waitlists are available to students during the registration process. For general classes, when a seat opens, the first student on the list is emailed and given a time period with which the student can add the course. It is the student's responsibility to check their CMU email for notification that his/her waitlisted class has opened. Failure to register within the designated time frame will result in the student being removed from the waitlist and the opportunity moving the next student on the list. The electronic waitlist is deleted after the first week of a sixteen-week class (1/16 of the class for non-standard parts of term).

Electronic waitlists for courses with co-requisites (lecture/lab combinations) are administered by the Registrar's Office. The open spaces are given to

the first student on the waitlist who can successfully be registered for both the lecture and lab. The waitlist on co-requisite courses will be cleared the Friday before the semester starts to ensure class/lab combinations fill.

The time limit to add from the waitlist will drop from 72 hours to 48 hours the week before school starts and down to 24 hours once classes begin. Students still wishing to add a closed class after the waitlist has been deleted must submit a complete Change of Schedule form with instructor's signature to the Registrar's Office prior to the add deadline (class census).

Family Educational Rights and Privacy Act (FERPA)

General Policy

The Family Educational Rights and Privacy Act (FERPA) provides students who are enrolled in an institution of postsecondary education the right to inspect, review, and challenge their educational records. Colorado Mesa University has the responsibility of maintaining and protecting the confidentiality of students' official educational records. Colorado Mesa University also supervises the access to and/or release of educational records of its students. FERPA covers enrolled and former students, including deceased students. Students who are not accepted to Colorado Mesa University, or if accepted, do not attend, have no rights under FERPA. In addition, the University will not release personally identifiable records of students to any individual, agency or organization without the prior written consent of the student, except as provided by FERPA.

Directory Information

Colorado Mesa University may, without the consent of the student, release to persons outside the institution information designated as Directory Information in accordance with the provisions of FERPA. Directory Information shall include information in an educational record which would not generally be considered harmful or an invasion of privacy if released, including but not limited to:

1. Student name, address, telephone #
2. Date and place of birth
3. Major fields of study
4. Participation in officially recognized activities and sports
5. Weight and height of athletic team members
6. Photographs
7. Dates of attendance to include enrollment status (i.e., full time or part time)
8. Degrees and awards received
9. Most recent educational institution attended
10. E-mail address

Note: At any time, a student may request to the Registrar's Office that Directory Information not be released to other parties without written permission. This request will be honored until the student requests in writing that Directory Information be disclosed.

Access to Student Educational Records

FERPA provides current students, former students, and parents of students who claim the student as a dependent (according to Internal Revenue Code of 1954, Section 152) for income tax purposes on their most current federal tax return the right to inspect, review, and challenge their educational records.

Students are permitted to inspect and review their educational records within a maximum of 45 days after the request is received. Students may not review financial information received from their parents or guardians; confidential letters and recommendations placed in their files prior to January 1, 1975; academic records containing information regarding other students; administrative, disciplinary, law enforcement, student health records, and/or records which are maintained in the sole possession of the maker.

While students who have a financial hold or past due account (all holds included) have a right to inspect their academic records, no transcript will be released to the student or other party until holds are reconciled. Bankruptcy, however, removes any financial obligations the student has to Colorado Mesa University. Please contact the Registrar's Office with questions regarding this policy.

No-Credit Desired/ Audit Courses

A student who desires to attend certain undergraduate classes regularly, but does not wish to receive grades or credit, should register for "no-credit desired" in these classes.

Tuition charges for classes taken under the "no-credit desired" category are the same as for classes taken for credit, but are not eligible for the COF voucher.

The deadline for a student to change from "no-credit desired/audit," to credit is the same as the deadline to add a class. The last day for a student to change from credit to "no-credit desired/audit" is the same as the deadline to drop a class.

Golden Scholars

(formerly Senior Passport Program)

Colorado Mesa University provides individualized support, including academic and scheduling decisions, for persons 60 years and older. For more information, contact the Registrar's Office.

Classes for Credit

Persons 60 years or older who wish to enroll for credit must submit required admission and registration materials to the Admissions Office. The same deadlines, costs, etc., as for other students will apply.

Classes for No Credit

Persons 60 years of age or older who do not wish to earn college credit may attend undergraduate resident instruction classes on a space-available, instructor-approved basis at Colorado Mesa University for a reduced fee.

Interested persons should obtain an application from the Registrar's Office. Once admitted, registration for classes is at the beginning of the semester either through MAVzone or the Registrar's Office. Courses needing special permission must have faculty approval on a signed Add/Drop Form submitted to the Registrar's Office.

General Undergraduate Academic Policies

Student Load and Limitations

The normal student load is 15 semester hours (some disciplines require a higher number). The minimum load required for a student to be recognized as a full-time student is 12 semester hours. If students register for fewer than 12 semester hours, they are classified as part-time students.

Students receiving scholarships and/or financial aid are generally expected to complete 12 hours of credit courses each semester. In order to receive full Veteran's Administration financial benefits, veterans must be enrolled in 12 or more semester hours each semester of attendance, for the entire semester.

It is recommended that students in good academic standing limit their academic load to 18 semester hours or fewer. Students must obtain a signature from their advisor before attempting an overload between 19-21 semester hours in a regular semester or between 10-12 semester hours in a summer term. Students interested in enrolling for more than 21 hours in a regular term or more than 12 in a summer term must submit, in writing, their plan for success during the overload and obtain signature approval from their faculty advisor. Students must then obtain signature approval from the department head with oversight over their degree program and the Vice President of Academic Affairs. Students earning a cumulative Colorado Mesa University grade point average of 2.00 or lower will be limited to 15 credit hours in the fall/spring semesters.

English and Mathematics Requirements

Colorado Mesa University students are required to complete the Essential Learning Core English and Mathematics requirements prior to exceeding 60 semester credit hours. Students should take the courses as freshmen. Those who need developmental courses before they are ready to enroll in the required courses should enroll in the developmental courses their first semester at Colorado Mesa University. Any required English and mathematics developmental courses must be completed with a "C" or higher. Students who are completing 60 hours of course work will have a registration hold placed on their account blocking them from enrolling in any additional courses until they have passed the required courses. Students are encouraged to work with the Registrar's office staff to enroll in courses. Exceptions to this policy require the written permission of the appropriate department head (Language, Literature and Mass Communication or Computer Science, Mathematics and Statistics) or their designee.

Maverick Milestone

The Maverick Milestone (ESSL 290) and Essential Speech (ESSL 200) courses will be taken concurrently on a student's first attempt unless special permission is granted by the Assistant Vice President of Academic Affairs to do otherwise. A student may take the courses separately only for purposes of grade improvement or when the student wishes to take ESSL 290 for elective credit after the successful completion of the EL Capstone requirement (ESSL 290 and ESSL 200). ESSL 290 and ESSL 200 are technically treated as distinct courses with distinct grades. However, credit applied toward graduation requirements cannot be earned for either ESSL 290 or ESSL 200 until satisfactory credit (passing) is earned in both.

Students who are completing 75 hours of course work will not be permitted to enroll in any additional courses until they have passed both ESSL 290 and ESSL 200. Exceptions to the policy require the written permission of the Assistant Vice President of Academic Affairs or designee.

Student Preparation/ Academic Engagement for Class Meetings

In compliance with the requirements of the U.S. Department of Education and consistent with the expectations of the Colorado Commission on Higher Education, Colorado Mesa University defines a contact hour as 50 minutes. Thus a one credit hour, 15-week course equates to 750 minutes (15 contact hours) of **academic engagement** plus a minimum of 1500 minutes (30 hours) of **student preparation**.

An undergraduate student should expect to spend on an individual course a minimum of two hours outside the classroom for every hour in the classroom. The outside hours may vary depending on the number of credit hours or type of course. This expectation applies to all courses, regardless of wherever or however the instruction is delivered. More details are available from the faculty member or department office and in CMU's Curriculum Policies and Procedures Manual.

"Academic engagement" may include, but is not limited to, submitting an academic assignment, listening to class lectures or webinars (synchronously or asynchronously), listening to a guest speaker, taking an exam or quiz, completing a writing assignment, an interactive tutorial or computer-assisted instruction, attending a study group that is assigned by the institution, conducting research (e.g., for a project, play production, etc.), contributing to an academic on-line discussion, initiating contact with a faculty member to ask a question about the academic subject studied in the class, conducting laboratory work, completing an externship or internship.

"Student preparation" may include, but is not limited to, homework such as reading and study time, completing outside assignments and projects, practice for performance, writing lab reports, attending mandatory theatre and music performances, observing

professional meetings (e.g., school board meetings for education courses), and attending faculty seminars and colloquia.

Classification Status

A student is classified based on the number of semester hours successfully completed as follows:

0 - 30	Freshman
31-60	Sophomore
61-90	Junior
91+	Senior

Grading System

Grades at Colorado Mesa University are as follows:

A = Excellent to superior;
B = Good to excellent;
C = Satisfactory;
D = Passing but not satisfactory;
F = Fail;
I = Incomplete;
IP = In progress;
W = Withdraw;
NC = No credit;
P = Pass.

Incomplete ("I") grades are temporary grades given to a student only in an emergency case and at the discretion of the instructor.

At the end of the semester following the one in which an "I" is given, the "I" becomes the grade that is submitted by the instructor to the Registrar's Office. If the instructor does not submit a grade by the deadline for that semester, the grade becomes an "F." A grade of "I" given spring semester must be addressed by the end of the following fall term.

Extension of the time to complete work may be made in exceptional circumstances at the discretion of the instructor. A student with an "I" grade, however, may not change the "I" by enrolling in the same course another semester.

Grades of "P" are passing grades and are not included in the GPA. "P" grades at the undergraduate level are only used for zero credit hour courses, sub-100 level labs or non-traditional credits such as CLEP, AP, military credits, etc., and may be applicable toward graduation.

Academic Standards

The scholastic standing of a student at Colorado Mesa University is computed on the basis of all courses attempted at Colorado Mesa University (unless academic renewal has been approved; see next page). Grades awarded from any other institution will not be utilized in the grade point average (GPA) calculation.

Colorado Mesa University uses the four point system in computing the grade point average of its students. Under this system, a student receives four quality points for each semester hour of A; three points for each semester hour of B; two points for each semester hour of C; one point for each semester hour of D; and no quality points for an F. An example follows:

3 Semester Hours of A =	12 points
3 Semester Hours of B =	9 points
3 Semester Hours of C =	6 points
3 Semester Hours of D =	3 points
3 Semester Hours of F =	0 points
15 Semester Hours	30 points

Thirty (30) points divided by 15 semester hours = 2.00 GPA

GPA Minimum

Students are considered to be making "satisfactory progress" toward a degree if they attain a cumulative GPA consistent with the table listed below. Incomplete ("I") and In Progress ("IP") grades are tentative grades and until changed are not considered in computing either the cumulative grade point average or the grade point average for the particular semester concerned. "W" hours do not count as hours attempted or in the GPA. (See section on Withdrawal Procedures)

Cumulative Credit Hours	Cumulative GPA
0 – 15	1.70
16 – 30	1.80
31 – 45	1.90
46 and above	2.00

Students failing to achieve the minimum GPAs listed above will be placed on academic probation. The student will remain on probation until the minimum GPA is achieved, providing the student earns a minimum semester GPA of 2.00. If a student already on academic probation fails to earn a semester GPA of 2.00, the student will be placed on academic suspension. The student will be prohibited from further attendance at Colorado Mesa University for a minimum of one semester (see Academic Probation and Suspension section.)
A student must achieve a cumulative grade point average of 2.00 or higher to graduate at the certificate, associate, or baccalaureate level. Some programs have additional GPA requirements to remain in and graduate from that program. See Programs of Study section and subject program sheet for specifics.

Calculation of Grade Point Average for Graduation

Only the grades and credits awarded at Colorado Mesa University will be used in calculating the student's grade point average for graduation. Grades awarded from any other institution will not be utilized in the grade point average calculation.

The specific discipline area program requirements must be completed as required by the appropriate academic department with a cumulative grade point average of 2.00 or higher.

Academic Probation and Suspension

Good Standing signifies that the student is making satisfactory academic progress (see Academic Standards section) and is eligible to continue studies at Colorado Mesa University.

Academic Probation indicates a student is not in good standing and constitutes a warning to the student that the student's scholastic achievement needs improvement or suspension will result. Students will be placed on academic probation if their cumulative grade point average at Colorado Mesa University falls below the minimums listed under GPA minimum.

Upon being placed on academic probation, students are permitted to continue studies for one semester, during which time they are expected

to improve their cumulative grade point average to the minimum required levels. Those who succeed will be removed from academic probation.

Students on academic probation will remain on academic probation until they raise their cumulative grade point average to the required level. Once on probation, a student must maintain a minimum semester grade point average of 2.00 to avoid being placed on academic suspension. Additionally, students with a cumulative Colorado Mesa University grade point average of 2.00 or lower will be limited to 15 credit hours per semester.

Academic Suspension indicates the student is not in good standing and represents a temporary, involuntary separation of the student from the University for a minimum of one semester for failure to meet minimum academic standards.

Following an academic suspension, a student must apply for readmission to Colorado Mesa University. For degree programs that do not have separate admission policies, the readmission to Colorado Mesa University is also readmission to the degree program as long as the degree still exists. For degree programs having admission policies over and above admission to Colorado Mesa University, the student must also reapply to the degree program.

A student may be suspended from and readmitted to Colorado Mesa University a maximum of two times. Academic suspension, when imposed, becomes effective immediately upon the recording of grades at the end of the semester or summer term.

The first suspension shall be for a period of one semester; i.e., a student suspended at the end of fall semester may not attend the following spring semester; a student suspended at the end of spring semester may not attend the following summer and fall semesters. A student suspended at the end of summer term may not attend the following fall semester.

The second suspension shall be for a period of two semesters (i.e., a student suspended at the end of fall semester may not attend the next spring or fall semester; a student suspended at the end of spring semester may not attend the following fall or spring semester). A student suspended at the end of summer term may not attend the following fall or spring semester.

If the suspension is due to substantial non-academic circumstances outside the student's control (i.e., major medical issues, serious car accident, etc.), the student may submit a letter of appeal with documentation to the Suspension Appeal Committee in the Registrar's Office. Deadlines and appeal instructions are outlined in the Registrar's Office website. Filing an appeal does not guarantee approval and the committee's decision is final.

Students may not enroll in any credit classes whatsoever (including summer term) during the period of suspension.

Course Repeat/ Grade Improvement

Any course which is taken more than once for academic credit at Colorado Mesa University is done so only for "grade improvement" wherein academic credit is awarded only once and the best grade received is the one used to compute the student's cumulative grade point average and to fulfill requirements for the degree.

The lower grade will be excluded from the earned hours for the term taken and will be excluded from the GPA calculations. This may cause a negative effect on financial aid, Veteran benefits, athletic eligibility, scholarships, and other areas that use earned hours to determine student benefits. It is the student's responsibility to work with the appropriate departments to consider options and potential consequences prior to repeating the course.

Exceptions to this policy are DANC (performing dance), MUSL (music lessons) and MUSP (performing music) classes, each of which may be taken twice for academic credit; Independent Studies (a maximum of six semester credit hours may be taken for credit – see the Independent Study section in this catalog); and in some cases Topics, Practica, Seminars, Internships, Structured Research, and Cooperative Education. See program sheets and the appropriate department head or director for these exceptions.

Additionally, program-specific exceptions to retaking courses for grade improvement may exist regarding courses in the major and may supersede the University's general policy. Students should check with the head of the academic department for their major to determine if there are any restrictions for repeating a course.

The option of repeating a course for grade improvement is available to a student only if the course s/he wishes to repeat is still offered at Colorado Mesa University and is scheduled to be offered in the semester in which the student wishes to take it.

Courses taken at Colorado Mesa University may not be repeated at another university for improvement of the original grade and courses taken at another university may not be repeated at Colorado Mesa University for improvement of the original grade.

Academic Renewal

A student who re-enrolls at Colorado Mesa University following an absence of at least five years may be eligible for academic renewal. If academic renewal is approved, none of the course credits and grades earned at Colorado Mesa University prior to the five-year minimum absence will be used for meeting graduation requirements or in determining the student's grade point average.

Among the requirements to be eligible to apply/petition for "academic renewal" is that the student must have completed 24 academic course credits at Colorado Mesa University, excluding kinesiology courses and remedial courses below the 100 level, with a minimum grade point average of 3.00. The student must apply/petition in the Registrar's Office no later than the semester following the completion of these 24 semester credit hours. Matriculation and/or course completion at other institutions during the five-year period of absence has no bearing on the application/petition.

Non-Traditional Credit

Non-traditional credit can be earned from sources such as the following:

1. Advanced Placement Program

Students wishing academic credit or advanced placement for college level work done while enrolled in high school should take the appropriate College Board Advanced Placement examination. These exams are administered several times each year at numerous locations throughout the United States. College Board Advanced Placement examination scores currently accepted by Colorado Mesa University are: Studio Art-General; Studio Art-Drawing; Art History; Biology; Chemistry; Computer Science A; Computer Science AB; Macroeconomics; Microeconomics; English Literature & Composition; English Language & Composition; French Language; French Literature; German Language; German Literature; Latin-Virgil; Latin Literature; Spanish Language; Spanish Literature; Government & Politics-United States; Government & Politics-Comparative; US History; European History; World History; Human Geography; Mathematics-Calculus AB; Mathematics-Calculus BC; Music Theory; Physics B; Physics C;-Mechanics; Physics C-Electricity & Magnetism; Psychology; and Statistics.

The Registrar's Office will supply information concerning the scores required for earning academic credit in the various subject areas.

2. Credit by Examination and Department Challenge Exams

Students attending Colorado Mesa University and Western Colorado Community College may earn college credit by examination in certain subject areas through the College Level Examination Program (CLEP) and DANTES Examination Program. The Registrar's Office will supply information concerning the scores required for earning academic credit in the various subject areas.

Credit may also be earned by subject matter tests offered through various departments at Colorado Mesa University and Western Colorado Community College through departmental challenge exams. See the specific department for more information on possible challenge exam options. Students must be accepted to Colorado Mesa University before the approved CLEP and challenge exam credits will be recorded as transferable credit.

3. International Baccalaureate Program

Colorado Mesa University recognizes the International Baccalaureate Diploma Program and awards credit to qualifying high school students based on their examination scores. For policy details contact the Registrar's Office or check the CMU website.

4. Credit for Prior Learning

The practice of awarding credit for college-level prior learning is based upon the belief that education which builds on, interprets, and incorporates past and present knowledge is the education that is most meaningful to the student. Colorado Mesa University and Western Colorado Community College recognize that students may have gained college-level knowledge and competencies through their work and life experiences which can be incorporated into their academic programs.

The development of a portfolio to demonstrate competency acquired through work or other life experience can be pursued for many technical or applications-based areas. Students wanting to pursue this option must enroll in UNIV 105 Competency Portfolio Development. The portfolio will be produced in collaboration with faculty from the desired department. Students must obtain course syllabi and complete the application for prior learning credit to participate in the Portfolio Development Workshop. For policy details see the Registrar's Office or check the CMU website.

5. Cooperative Education, Internships, Practica

Cooperative education is a working partnership in which an educational institution such as Colorado Mesa University or Western Colorado Community College joins with an employer in a structure relationship. The basic purpose is that of providing a means whereby a student can combine college study with a work experience which is under employer supervision to fulfill the total requirements of a particular educational program.

Cooperative education is a three-way partnership involving the student, the employer and the university. There is a great deal of difference between cooperative education and simply holding a job. Cooperative education is based on learning objectives which are related to the student's academic discipline and are established in cooperation with student, the employer, the faculty advisor, and others at Colorado Mesa University.

Typically, cooperative education is open to junior and senior students. Interested students should consult with their faculty advisor and academic department head or director. There are limits on the number of credits which will apply towards a degree. Graduate students should consult the Graduate Policies and Procedures section of this catalog.

Non-traditional Credit Guidelines

The faculty and department head of each department determine if and under what conditions non-traditional credit is allowed. If allowed, the following limits apply:

1. Military credits – maximum of 30 lower division semester credit hours.
2. CLEP, DANTES & Credit by Examination/Department Challenge Exams – maximum of 30 semester credit hours for a baccalaureate degree, 20 semester credit hours for an Associate of Applied Science degree, 12 semester credit hours for an Associate of Arts or an Associate of Science degree, and 6 semester credit hours for a technical certificate. Students may not earn CLEP or DANTES credit in a class in which they have previously been enrolled including a class from which the student withdrew, so that the transcript shows a W, WP or WF. Students must receive approval and follow the procedure to challenge a course, including enrolling in that course. See the Registrar's Office for a copy of the procedure.
3. Advanced Placement – maximum of 30 semester credit hours for a baccalaureate degree, 15 semester credit hours for an associate degree, or six semester credit hours for a technical certificate.
4. International Baccalaureate – The subject exams and score shown on each student's transcript will determine the number of semester credit hours allowed. Maximum of 30 semester credit hours for a baccalaureate degree or 15 semester credit hours for an associate degree.
5. Competency Credit/Credit for Prior Learning – maximum of 30 semester credit hours toward a baccalaureate

degree or 25 percent of the total semester credit hours required for an associate degree at the prerogative of the department head. A student may earn the maximum of 25 percent of the total semester credit hours required toward the degree or certificate through portfolio assessment. Other restrictions may apply. See the Registrar's Office for details and guidelines or CMU website coloradomesa.edu/eso/pla.html.

6. Cooperative education, Internships, Practica, etc. – maximum of 15 semester credit hours may be used to satisfy the required academic semester credits for a baccalaureate degree and 6 semester credit hours may apply toward an Associate of Arts or Associate of Science degree. A maximum of 15 semester credit hours may apply toward the 40 upper division hour requirement. No restriction on the maximum number of semester credit hours above and beyond any degree requirement is intended. These restrictions do not apply to the Associate of Applied Science degree or technical certificate programs.

The total combination of non-traditional credit cannot exceed:

1. 30 semester credit hours for a baccalaureate degree;
2. 15 semester credit hours for an Associate of Arts or Associate of Science degree;
3. 20 semester credit hours for an Associate of Applied Science degree;
4. Twenty-five percent of the semester credit hours required for a technical certificate.

Independent Study

Independent study permits the motivated student an opportunity to expand his or her body of knowledge beyond the scope of the standard curriculum. It endeavors to foster qualities of self-initiative, organizational skills, self-discipline and independent thinking. It is expected that the student will engage in intensive study and research of the topic.

Independent study does not satisfy essential learning requirements or specific course requirements. Independent study hours may be taken for elective credit. Independent study is available primarily to students at the junior and senior levels with a minimum GPA of 2.75 except in certain certificate and AAS programs.

The work is to be completed within one semester from the initiation date and is limited to a total of six or fewer semester credit hours taken at Colorado Mesa University.

The department head or director of the academic department issuing credit must approve any exceptions.

An Individualized Learning Contract, available from the academic department head, is to be initiated by the student desiring independent study in consultation with a supervising instructor. The contract must include justification, description, monitoring, and evaluating procedures, and the approval by the instructor and department head.

Further restrictions apply in some disciplines. Students wishing to take an independent study should check with the appropriate instructor and/or department head or director well in advance.

With permission of the instructor, students may register for regular classes but do the work independently, or on their own. This is not the same as "Independent Study." Students who have made prior arrangement with the instructor will still register for the regular course, and not for Independent Study.

Laboratories

Many courses at Colorado Mesa University have both lecture and laboratory components to a single course. The class and laboratory portions are technically treated as different courses with distinctive numbers and individual grades. A student is usually required to be concurrently enrolled in both class and laboratory. Credit applied toward graduation cannot be earned for the class or laboratory unless credit is earned in both.

Learning Progress Evaluation

The evaluation of a student's learning progress in a course is considered to be a planned and continuous process and consists of a variety of activities including judgment, observation, testing, etc. Final examinations are a part of the evaluation process.

Article 13 of House Bill 1187, enacted in July of 1985 by the Colorado General Assembly, established that institutions of higher education in Colorado are to be held accountable for demonstrable improvements in student knowledge, capacities, and skills between entrance and graduation.

Students are required by Colorado Mesa University to take part in testing and other programs deemed necessary for compliance with this legislation. Students who do not abide by these requirements may be denied registration and/or graduation privileges. Portions of the assessment process may require time outside the normal class periods.

Honor Lists

The **President's List** is made up of those students who earn a GPA of 4.00 while enrolled in a minimum of 12 semester hours for a particular semester.

The **Dean's List** includes students who achieve a grade point average of between 3.50 and 3.99 while enrolled in a minimum of 12 semester hours for a particular semester.

The lists are based on semester grades, not cumulative grade point averages. Regardless of grade point average, a student who receives a failing grade ("F") in any course is not eligible for the Dean's List.

To graduate with Honors or Distinction, the student's cumulative grade point average will be used in the determination of inclusion in the Honors/Distinction categories listed below. Each year during formal commencement ceremonies Colorado Mesa University recognizes the following categories of academic achievement:

For Associate Degrees:

With Distinction—
Associate degree graduates with cumulative grade point averages of 3.50 to 3.74.

With High Distinction—
Associate degree graduates

with cumulative grade point averages of 3.75 to 4.00.

For Baccalaureate Degrees:

Cum Laude—
Baccalaureate degree graduates with cumulative grade point averages of 3.50 to 3.74.

Magna Cum Laude—
Baccalaureate degree graduates with cumulative grade point averages of 3.75 to 3.89.

Summa Cum Laude—
Baccalaureate degree graduates with cumulative grade point averages of 3.90 to 4.00.

The grade point average for honors/distinction at commencement does not include final-term, in-progress courses. The ultimate honors/distinction recognition to appear on the permanent record/transcript will reflect the appropriate category based on the inclusion of the final-term course grades required for the completion of degree requirements.

Honor Societies

Membership in **Alpha Chi** is the highest academic honor which Colorado Mesa University can bestow upon its scholars. To be eligible for election, students must have completed at least 75 semester hours toward the baccalaureate degree with a GPA of 3.75 or better and be fully recognized by their faculty and department heads as having the qualities of character pertaining to the true scholar. Alpha Chi is the second oldest and second largest of those national scholastic honoraries which elect members from all academic fields.

Alpha Phi Sigma is the national honor society in criminal justice. For membership in Alpha Phi Sigma, a political science major or other student who has completed at least four classes in criminal justice must maintain an overall GPA of 3.20.

Beta Beta Beta is the National Honor Society in Biology at Colorado Mesa University. For full membership in Beta Beta Beta, a biology major must have completed at least three classes in biology and have a minimum GPA of 3.00. With these qualifications, a student may be nominated for membership.

Kappa Mu Epsilon is an honor society for students of mathematics. Its chapters are located in colleges and universities of recognized standing which offer a strong mathematics major. The nominated and inducted members are selected from students of mathematics and other closely related fields who have maintained high standards of scholarship, have professional merit, and have attained academic distinction. The local chapter, Colorado Delta, is a working organization throughout the academic year. It functions as an integral part of the Computer Science, Mathematics, and Statistics Department of Colorado Mesa University.

Nu Kappa Chapter, Sigma Theta Tau International, recognizes achievement in nursing. The purposes of the society are to recognize superior achievement and leadership qualities, foster high professional standards, encourage creative work and strengthen commitment to the ideals and purposes of the profession. Students must have a minimum GPA of 3.00 and rank in the upper 35 percent of their class to be eligible for membership. Nurses from the community may also be nominated for membership if they have demonstrated marked achievement in nursing education, practice, research or publication.

Phi Alpha Theta is the international honor society in history. The objective of this professional honor society is the promotion of the study of history through the encouragement of research, good teaching, publication, and the exchange of learning and thought among historians. To be eligible for membership, a student must have completed twelve or more hours of history with a minimum GPA in history of 3.10 and a minimum overall GPA of 3.00.

Pi Sigma Alpha is the national honor society in political science. For membership in Pi Sigma Alpha, a political science major or other student who has completed at least four classes in political science (three at the 300 or 400 level) must maintain an overall GPA of 3.00 and a 3.2 GPA in political science.

Psi Chi, the national honor society in psychology, is open for membership to students with either a major or minor in psychology. Minimum qualifications for membership are as follows: rank in the top 35% of one's class with a minimum 3.00 overall GPA; 3.25 psychology GPA; completion of 9 semester hours in psychology; and completion of at least three semesters of university coursework. The purpose of Psi Chi is to promote and maintain excellence in scholarship in the field of psychology and to advance the science of psychology.

Sigma Gamma Epsilon, a national honor society for the earth sciences, has for its objectives the scholastic and scientific advancement of its members and the extension of friendship and assistance among colleges, universities, and scientific schools for the advancement of the Earth Sciences. Membership in Zeta Nu Chapter of Sigma Gamma Epsilon is open to continuing Earth Science majors with at least twelve credit hours of Earth Science coursework completed with a minimum GPA of 3.00. Qualified students are reviewed and may be nominated each semester.

Sigma Pi Sigma is the national honor society in physics. For membership in Sigma Pi Sigma, a physics major or other student who has completed at least three classes in physics must maintain an overall GPA of 3.00 and a 3.25 GPA in physics. A qualifying student may then be nominated for membership by the combined physics faculty.

Sigma Tau Delta, the national English honor society, endeavors to encourage, promote, and recognize scholarship and achievement in English language and literature. Membership is open to sophomore, junior, and senior English majors with a minimum GPA of 3.00 in English.

Upsilon Pi Epsilon is the national honor society for computer science.

Student Conduct

Colorado Mesa University is a community consisting of students, faculty, support staff, and administrators. The University does not attempt to define all "student conduct." It relies on students to assume the responsibility and obligation of conducting themselves in a manner compatible with the purpose of the University as an educational institution and the community as a place of residence. In addition to University rules and regulations, all students are subject to the same local, state, and federal laws as non-students

and are beneficiaries of the same safeguards of rights as non-students.

The Student Code of Conduct can be found in its entirety published in the Maverick Guide (http://www.coloradomesa.edu/studentservices/conduct.html). Questions relating to student conduct may be referred to the Office of the Vice President for Student Services, located in Lowell Heiny Hall 107.

Academic Integrity

All faculty, administration, and students of Colorado Mesa University have a responsibility for establishing and fostering an understanding of the importance of academic integrity. Academic dishonesty includes but is not limited to representing work of others as your own without proper acknowledgment, giving or receiving assistance on exams, papers, projects, or assignments unless authorized to do so; and misrepresenting your identity or allowing others to do so. Incidents should be reported to the instructor of the course if possible, or contact the Academic Department Head. Actions may be taken as a result of academic dishonesty. For more details, see the Maverick Guide at http://www.coloradomesa.edu/studentservices/documents/MaverickGuide.pdf.

Student Complaint Policy

An official complaint is when a student alleges:

1. the institution has violated local, state, and/or federal law;
2. a breach of contract e.g. failure to meet institutional obligations as presented in a recruiting material document, application for enrollment or student housing, course syllabus, etc.; or,
3. a passive response by the institution to a complaint by a student that resulted in material damages to the student.

Disagreement with an administrative decision, or the outcome of an appeal of that decision, is not a complaint unless it alleges improper, unfair, or arbitrary treatment. The complaint must be in writing with an identifiable signature and is not already covered by another existing policy or process (see attached table).

A student wishing to file a complaint should do so as promptly as possible following the alleged violation, but by no later than February 15 for a concern occurring during the prior fall semester, June 15 for the prior spring semester, and September 15 for the prior summer term. Timely initiation of a complaint rests with the student. The complaint should be in writing and signed by the complainant or submitted electronically from a Colorado Mesa University student email address. The complaint should 1) describe the issue that is the basis for the complaint, including the steps have been taken to informally resolve the problem, and 2) include any relevant documents the student would like to be reviewed as part of the complaint process.
Depending on the nature of the violation, the complaint should be sent to the Office of the -

- Vice President for Academic Affairs or the Vice President for Community College Affairs if the concern is academic-related;
- Vice President for Finance and Administration if service-related;
- Vice President for Student Services if behavior or conduct related; or
- Director of Human Resources if an alleged violation of discrimination in employment or education opportunity.

For additional information, go to http://www.coloradomesa.edu/academics/documents/StudentComplaintPolicy_Final.pdf

Student Appeals

Students have the right to appeal actions or sanctions (such as those relating to grades or academic dishonesty) and should begin the process by meeting with the course instructor. The Maverick Guide provides a detailed explanation of Academic Integrity, Academic Dishonesty, Student Appeals, Grade Appeals and related processes. The guide is available on the CMU website at http://www.coloradomesa.edu/studentservices/documents/MaverickGuide.pdf. The University provides that all student concerns, grievances, and appeals that are not covered under a specific policy may be directed either to the Office of the Vice President for Academic Affairs or to the Office of the Vice President for Student Services.

Hamilton Recreation Center, The Maverick Center

Requirements for Undergraduate Degrees and Certificates

Contact: Registrar's Office, Lowell Heiny Hall Room 121, Colorado Mesa University, 1100 North Avenue, Grand Junction CO 81501-3122. Call 970.248.1555.

Students are expected to assume responsibility for planning their academic programs in accordance with University and department policy. Students are responsible for obtaining a program sheet, available online at coloradomesa.edu/academics or from the appropriate academic department, at the beginning of their work detailing the specific requirements for the degree or certificate being pursued. Students are urged to consult with their advisors. The University assumes no responsibility for difficulties arising when students fail to establish and maintain contact with their faculty advisor or department head. Students are ultimately and solely responsible for knowing the requirements for a particular degree and for fulfilling those requirements.

Requirements for Degrees

Some requirements may vary with the program and academic department. Students must abide by the rules set forth in the program sheet which may be obtained from the department offering the degree they are seeking or online at coloradomesa.edu/academics/1617-program-sheets.html.

A useful advising tool for students is DegreeWorks, an online degree audit reporting tool available via Mavzone. DegreeWorks utilizes the published program sheets and the graduation requirements printed in the catalog to create an electronic list of required courses and options in each degree. Any discrepancies in requirements should be reported to the Registrar's Office.

Graduation Checklist and Commencement Deadlines

Graduation documents are due the semester prior to completion of all coursework and are available through the Registrar's Office. Candidates for all degrees must accomplish the following:

1. Meet with their advisor to create the final graduation plan which outlines how all requirements will be met by the desired graduation date. Depending on department requirements, the plan should be entered on the DegreeWorks Plans tab titled "Final Graduation Plan" or be submitted on a "Graduation Planning Sheet" form to the advisor and the Registrar's Office. The plan must be approved by the advisor either in DegreeWorks or a signature on the planning sheet.
2. Submit the "Intent to Graduate" form to the Registrar's Office by:
   - October 1 for May graduates.
   - March 1 for December graduates.
3. Register for all needed courses and complete all requirements for each degree sought.

The Registrar's Office will use the DegreeWorks report to verify degree progress for all students. It is the student's responsibility to discuss any questions or concerns from their DegreeWorks reports with their advisor or academic department head. Perceived DegreeWorks errors should be reported to the Registrar's Office for official investigation.

Commencement Ceremony Requirements and Deadlines

Students are eligible to participate in a commencement ceremony based on which semester they complete their graduation requirements. It is the student's responsibility to ensure that they are enrolled in the necessary courses or have a plan on file with the Registrar's Office using the "Graduation Planning Sheet" or DegreeWorks Plan which outlines how all requirements will be met. In the four months prior to the ceremony, students must be on track to complete all requirements to remain eligible to participate in the commencement ceremony.

Students who complete graduation requirements during the:	Are eligible to participate in the:
summer semester*	December commencement
fall semester	December or May commencement
spring semester	May commencement

*Summer graduates may participate in the May ceremony only if they are registered by April 15 for one or more summer courses that do not exceed six credits or an internship course that does not exceed 12 credits. The student must be able to finish the summer coursework by the end of the summer term.

Declaring a Major

The major students list on their application is considered for admission purposes. Once admitted, students may change their major. In order to be admitted/declared into the major, the major must be accepting students, and students must meet the requirements to be admitted to the degree. Some majors have additional admission requirements. Students must visit the department for more information. Students with an undeclared major are required to declare a major or meet with an academic advisor prior to registration.

Students must contact the academic department associated with their desired major/minor to declare or change their major/minor and to be assigned a faculty advisor. Once students have declared a major/minor, they will need to obtain a program sheet online or from the academic department.

Applicable Catalog and Degree Requirements

Students must follow the Colorado Mesa University graduation requirements from the catalog of the same academic year as the program sheet for the declared major. This is true provided that (1) students remain "continuously enrolled" until graduation and (2) the degree, emphasis or certificate area is still accepting students into the program when students officially declare their majors.

Students shall be considered to be "continuously enrolled" if there is no interruption in enrollment of more than one semester at any given time (excluding summer sessions). If an interruption in enrollment occurs so that students are no longer "continuously enrolled" as described above, the program sheet and catalog requirements applicable at the time of reenrollment shall apply.

If a candidate for a degree is unable to meet the major requirements because of some unforeseen circumstance, it is the candidate's responsibility to petition for an exception from his or her faculty advisor or department head.

Assessment of Student Learning

Colorado Mesa University is committed to providing quality education for students across all disciplines through a variety of campus activities. One means of continuously improving the quality of University offerings is through identifying specific learning outcomes that reflect what a graduate should know and be able to do, and then assess how well students meet those outcomes.

Assessment of student learning in academic programs is one of the processes faculty use to measure student progress in the knowledge and skills necessary to be successful. All CMU students are expected to engage in assessment activities, such as submitting course assignments, taking examinations, developing e-portfolios and/or completing surveys. These assessments center on specialized knowledge and applied learning in each major, in addition to intellectual skills that include communication, computation, and critical thinking. Student learning outcomes specific to each program of study can be found on the relevant program sheet and supporting course syllabi. Beyond the classroom, a second part of assessment involves student learning in co-curricular activities such as student life or service learning.

CMU students should plan to participate in assessment efforts and provide honest feedback that will assist the University to enhance the quality of its programs. More specifically, learning outcome data are compiled to assist faculty and staff members in making improvements in majors at all levels, Essential Learning (General Education) coursework, and student life programming. Finally, aggregated assessment results are reported to members of the CMU community, accreditation organizations, and state and federal agencies.

Deficiencies

All academic and financial deficiencies must be removed (i.e., incomplete grades and/or unpaid financial obligations) before the degree or certificate is conferred.

Final Credit Requirements Taken at Another University

Colorado Mesa University generally accepts academic credits from regionally accredited colleges and universities. When a student intends to earn a Colorado Mesa University degree, but the final credits for completing that degree program are earned at another institution, the following restrictions apply:

1. Specific approval of the proposed institution and courses must be given by the appropriate academic department head and the Office of the Registrar at Colorado Mesa University during the time of the student's last enrollment at Colorado Mesa University, and the student must receive a grade of "C-" or higher in each course. Some departments may have higher requirements.

2. No more than 30 semester hours of final credit will be accepted in transfer.

Requirements for Baccalaureate Degrees

Bachelor of Applied Science (BAS)
Bachelor of Arts (BA)
Bachelor of Business Administration (BBA)
Bachelor of Fine Arts (BFA)
Bachelor of Music (BM)
Bachelor of Music Education (BME)
Bachelor of Science (BS)
Bachelor of Science in Nursing (BSN)
Bachelor of Science in Radiologic Sciences (BSRS)
Bachelor of Social Work (BSW)

Credit Hour Distribution

Colorado Mesa University offers baccalaureate degrees in the traditional liberal arts and sciences disciplines and professional fields of study. Candidates for baccalaureate degrees must complete, in general, a minimum of 120 semester credit hours for a baccalaureate degree program. The distribution of the credit hour requirement is:

Essential Learning (General Education):
- Essential Learning Core Courses: 31 semester credit hours
- Essential Learning Capstone: 4 semester credit hours Consists of the Maverick Milestone and Essential Speech (co-requisites)

Wellness Requirement:
- 2 – 3 semester credit hours (varies by major)

Major Requirements:
- 36 – 48 semester credit hours in the program discipline; some professional programs may exceed 60 hours when including foundation courses

Degree Category Requirements:
- 3 – 6 semester credit hours
  - BS and BSN degrees require 3 semester credit hours.
  - BA and BSW degrees require 6 semester credit hours.
  - Some BFA degrees require 3 or 6 semester credit hours. This requirement does not apply to the BAS, BBA, and some BFA degrees. See the program sheet.

Unrestricted Electives:
- 0 – 36 semester credit hours

Students may not use the same course to satisfy more than one category within a degree. The program sheet indicates the specific number of semester hours that must be earned in courses numbered 300 or higher. Students must achieve a cumulative grade point average of 2.00 or higher for all courses taken and for the courses which comprise the area of the major field of study.

The program sheet lists all requirements for the degree program for the catalog under which students are working. Students should update their program sheet as they meet requirements. Students should work closely with their faculty advisors to meet graduation requirements. Program sheets are available online at coloradomesa.edu/academics or from the academic department at the time they declare their baccalaureate degree program at Colorado Mesa University. Students are ultimately and solely responsible for knowing the requirements for a particular degree and for fulfilling those requirements.

Academic Residency for Baccalaureate Degrees

To receive a baccalaureate degree from Colorado Mesa University, students must complete a minimum of 30 of the last 60 semester hours of credit through CMU with at least 15 semester hours in major discipline courses numbered 300 or higher.

Essential Learning

Learn... Express... Do...: CMU's Integrated Curriculum Model for a Baccalaureate Degree

The broad philosophy that underlies CMU's curriculum is Integrated Learning that expects students to draw on knowledge and skills from courses across disciplines, critically evaluate information, and apply what they have learned in response to a problem, argument or issue. Colorado Mesa University expects that students will graduate with a well-developed capacity for analytical thought and a heightened awareness of their world. In the university learning environment, students are expected to embrace great ideas and expressions of creative energy that define the human condition. CMU baccalaureate students explore and integrate learning from a variety of fields of knowledge while also focusing their attention on a particular area of interest. This combination produces graduates with an adaptable skill set for use throughout their personal and professional lives.

Upon graduation, a CMU baccalaureate student will be able to:
- Construct a summative project, paper, or practice-based performance that draws on current research, scholarship and/or techniques, and specialized knowledge in the discipline (communication; specialized knowledge; applied learning);
- Analyze data critically, reason logically, and apply quantitative analysis methods correctly to develop appropriate conclusions (quantitative fluency);
- Make and defend assertions about a specialized topic in an extended well-organized document and an oral presentation that is appropriate to the discipline (critical thinking);
- Describe reasoned conclusions that articulate the implications and consequences for a particular decision by synthesizing information and methodologies (critical thinking).

Essential Learning Lower Division Requirements

Essential Learning Overview

At the lower division level, success in CMU's baccalaureate programs requires participation in the Essential Learning curriculum, which at many institutions is identified as General Education. This change in CMU's description of its lower division curriculum to Essential Learning represents a faculty

and staff belief that these lower division courses form an important foundation for all majors in which students begin development of skills in written and oral communication, quantitative literacy and critical thinking. These courses also allow students to integrate what they learn in one course with that from others. The ability to integrate and apply learning and the development of the critical skills listed above are essential competencies for graduates to be successful in addressing the challenges of the twenty-first century.

The Essential Learning Program has two primary components: the Essential Learning Core (31 semester credit hours) and the Essential Learning Capstone (4 semester credit hours). The applicability of these components is described in the following section.

The Essential Learning Core provides students with a foundation in the arts and sciences, based on a range of courses in mathematics, natural sciences, fine arts, humanities and social sciences that complements and enhances a student's academic major. The exposure to multiple fields of study promotes intellectual respect for diverse people, ideas and cultures. This path of study develops skills critical to academic, personal and professional success while cultivating a passion for lifelong learning. Essential Learning courses, therefore, provide important tools that enable students to fully realize their potential at the baccalaureate level. When students have completed the Essential Learning Core, they possess enhanced abilities in critical thinking, quantitative analysis and communication that they will continue to develop in their academic major.

The Essential Learning program culminates in the completion of a Capstone course, the Maverick Milestone (3 credit hours) and its co-requisite, Essential Speech (1 credit hour). Building on the Essential Learning Core, the Maverick Milestone is a 200-level interdisciplinary, topics-oriented, writing-intensive course designed to help students develop the ability to approach problems and evaluate ideas using more than one set of intellectual tools. Students must enroll simultaneously in the Milestone's co-requisite, Essential Speech, which provides students with fundamental tools for verbally presenting ideas and information learned in the Milestone. Baccalaureate-seeking students are required to meet the Maverick Milestone/Essential Speech requirements in the time frame when they have earned between 45 and 75 credit hours. This pair of courses is an important transition between Essential Learning courses and upper-division work in the major.

Thus, upon completion of CMU's Essential Learning program, a student will be able to:

- Produce effective arguments and summaries in written English.
- Present information effectively in spoken English.
- Demonstrate quantitative literacy.
- Critically examine and evaluate an argument.
- Demonstrate investigative and analytical thinking skills to solve problems.
- Select and use appropriate information or techniques in an academic project.
- Construct an academic project using techniques and methodologies from multiple disciplines.

As students transition into upper division courses, they will focus more on specialized knowledge associated with their major. The on-going emphasis on developing written and oral communication, quantitative literacy and critical thinking skills will strengthen the students' problem-solving skills and integrate ways of thinking from various areas of study. By meeting the student learning outcomes for the lower-division coursework, students will enjoy an enriched learning experience in their major while also preparing for their chosen career paths.

Applicability of the Essential Learning Program Requirements

The Essential Learning Program's Milestone requirements apply to CMU baccalaureate-seeking students who enroll for the first time in Summer/Fall 2015 or later. Speechmaking/Public Speaking courses (CMU's SPCH102), whether taken from CMU or transferred from another institution, will be accepted in lieu of the ESSL 200 requirement. Students who have earned an Associate of Arts or Associate of Science degree from another institution, as well as those who have successfully completed the entire Colorado Core Transfer Consortium General Education Curriculum at another institution prior to transfer to WCCC/CMU, are exempt from the Maverick Milestone, Essential Speech and Wellness course requirements. All other policies noted in the section "Applicable Catalog and Degree Requirements" also apply.

Students who enrolled or declared a major at the baccalaureate level prior to Summer/Fall 2015 may choose between the former General Education requirements and the new Essential Learning program, but must be continuously enrolled as defined in the section "Applicable Catalog and Degree Requirements." All students should review the program sheet for their major and consult with an academic advisor as they consider their course selection.

Essential Learning program requirements do not apply to students who have previously earned a baccalaureate degree. Students pursuing an Associate of Arts (AA) or Associate of Science (AS) degree from WCCC must complete the 31 credit hour Essential Learning Core, but do not have to complete the four credit hour Essential Learning Capstone until they transfer into a baccalaureate degree program. Once a student makes the transition to a baccalaureate program, the Essential Learning Capstone requirement takes effect and should be completed in the earliest possible semester after which 45 credit hours has been earned.

Students enrolled prior to Summer/Fall 2015 have the option of completing CMU's previous Applied Studies requirement (3 semester credit hours) instead of CMU's current Essential Learning Capstone requirement (4 semester credit hours). Applied Studies courses are not considered as part of the Essential Learning Core for baccalaureate degree programs. For a list of approved Applied Studies courses, see the Applied Studies entry under the "Other Lower Division Requirements" section.

Students enrolled in an Associate of Applied Science (AAS) degree must complete 15 credit hours of Essential Learning Core courses for their major. Some courses may be specified on the program sheet.

Essential Learning Core Course Requirements
Each student must complete the 31 minimum semester hours Essential Learning Core requirement as specified by the Colorado Mesa University faculty. For specific course requirements and choices, refer to the section titled "Core Courses Approved for the Essential Learning Program Requirements."

English: 6 semester credit hours
Colorado Mesa University students are required to complete English composition for the Essential Learning requirement prior to exceeding 60 semester credit hours, preferably during their first year of enrollment. Those who are advised to enroll in developmental courses should do so before taking the required 100-level courses, preferably in their first semester at CMU.

English courses must be taken in sequence and students are encouraged to take them in consecutive semesters. Students must earn a "C" or higher in ENGL 111 before taking ENGL 112 or ENGL 219, and students must earn a "C" or higher in ENGL 112 to enroll in ENGL 219. Some programs may require a minimum grade of a "B" in all English Essential Learning courses.

Students who are completing 60 hours of course work will not be permitted to enroll in any additional courses until they have passed the required English courses. Exceptions to the policy require the written permission of the appropriate academic department head for English or designee.

Mathematics: 3 semester credit hours
Colorado Mesa University students are required to complete mathematics for the Essential Learning requirement prior to exceeding 60 semester credit hours, preferably during their first year of enrollment. Those who are advised to enroll in developmental courses should do so before taking the required 100-level courses. All prerequisite mathematics courses, as well as the Essential Learning mathematics course, must be completed with a "C" or higher.

Students who are completing 60 hours of course work will not be permitted to enroll in any additional courses until they have passed the required courses. Exceptions to the policy require the written permission of the appropriate academic department head for Mathematics or designee.

For specific mathematics requirements, students should complete the courses specified on the program sheet. For all majors, the mathematics requirement and any required mathematics prerequisite can only be met with a grade of "C" or higher.

History: 3 semester credit hours
Choose from selected history courses.

Three additional hours of history may be chosen to fulfill the Humanities requirement below.

Humanities: 3 semester credit hours
Choose from selected English, history, mass communication, philosophy and speech courses.

Social and Behavioral Science: 6 semester credit hours
Choose from selected archaeology, anthropology, computer science, economics, geography, political science, psychology, sociology and speech courses.

Fine Arts: 3 semester credit hours
Choose from selected art, dance, fine arts, music and theatre courses.

Natural Sciences: 7 semester credit hours
Choose from selected biology, chemistry, environmental sciences, geology and physics courses.

At least one of the two Natural Sciences courses must have an associated lab or field component, and both the lecture and lab must be taken in all courses listed which have both, if Essential Learning credit is to be received. Courses that fit this lecture and laboratory requirement are marked with an asterisk in the Natural Sciences list for Essential Learning.

Core Courses Approved for the Essential Learning Program Requirements
The following courses are approved to meet the Essential Learning Core requirements for baccalaureate and associate degrees from Colorado Mesa University. Students may select their Essential Learning courses from the list below according to their own preference unless specific Essential Learning Core courses are prescribed for their major or excluded after consultation with their advisor. Courses used to meet the requirements for the major cannot be used to fulfill the Essential Learning requirement. Essential Learning courses, however, can be double-counted between the major and minor or between majors. Requirements for a specific major are found at: coloradomesa.edu/academics.

Essential Learning Core course requirements may also be met with an appropriate AP, CLEP or DANTES test if the test has been approved by the appropriate academic department at Colorado Mesa University. Credit may also be awarded via the Credit for Prior Learning option. See Non-Traditional Credit section in this catalog for more information.

Most CMU Essential Learning Core courses below are approved by the Colorado Department of Higher Education for statewide guaranteed transfer, as part of the gtPathways program (see section on "Colorado Department of Higher Education Statewide Guaranteed Transfer Courses").

English

Option 1	
ENGL 111	English Composition and
ENGL 112	English Composition
or	
Option 2	
ENGL 112	English Composition and
ENGL 219	Introduction to Professional Writing

(The combination of ENGL 111 and ENGL 219 does not meet the Essential Learning English requirement.)

Mathematics

MATH 110	College Mathematics
MATH 113	College Algebra
MATH 119	Precalculus Mathematics
or MATH 149	Honors Mathematics
MATH 151	Calculus I
MATH 205	Elements of Mathematics II

Students seeking the BA, BFA, BM, BME or BSW degree must complete MATH 110 or a higher level mathematics course with a grade of "C" or higher to fulfill their mathematics competency under Essential Learning; students seeking the BS, BSN or BBA degree must complete MATH 113 or higher level mathematics course with a grade of "C" or higher to fulfill their mathematics competency under Essential Learning; students seeking the BAS degree must refer to their specific program to determine the mathematics competency requirement under essential learning.

History

HIST 101, 102	Western Civilization
HIST 131, 132	United States History

Humanities

ENGL 131, 132	Western World Literature I, II
ENGL 150	Introduction to Literature
ENGL 222	Mythology
ENGL 231, 232	Non-Western World Literature I, II
ENGL 254, 255	Survey of English Literature I and II
ENGL 261, 262	Survey of American Literature I and II
HIST 101, 102	Western Civilization
HIST 131, 132	United States History
MASS 110	Mass Media Impact and History
PHIL 105	Critical Thinking
PHIL 110	Introduction to Philosophy
PHIL 120	Ethics
PHIL 130	Philosophy of Religion
SPCH 102	Speechmaking (not approved for gtPathways)

Social and Behavioral Sciences

ANTH 202	Introduction to Anthropology
ARKE 205	Principles of Archaeology
CSCI 100	Computers in Our Society (not approved for gtPathways)
ECON 201	Principles of Macroeconomics
ECON 202	Principles of Microeconomics
FOAN 180, 180L	Survey of Physical Anthropology and Lab
GEOG 102	Human Geography
GEOG 103	World Regional Geography
POLS 101	American Government
POLS 151	Introduction to Political Ideas (not approved for gtPathways)
POLS 261	Comparative Politics
POLS 270	World Politics (not approved for gtPathways)
PSYC 150	General Psychology
PSYC 233	Human Growth and Development
SOCI 101	Introduction to Lesbian, Gay, Bisexual and Transgender Studies
SOCI 120	Technology and Society
SOCO 144	Marriage and Families
SOCO 260	General Sociology
SOCO 264	Social Problems
SPCH 101	Interpersonal Communications (not approved for gtPathways and cannot be used to substitute for ESSL 200 of the Essential Learning Capstone Requirement)

Fine Arts

ARTE 101	Two-Dimensional Design
ARTE 102	Three-Dimensional Design
ARTE 115	Art Appreciation
ARTE 118	Survey of Art History, Prehistory to Renaissance
ARTE 119	History of Art, Renaissance to Present
DANC 115	Dance Appreciation
FINE 101	The Living Arts
MUSA 220	Music Appreciation
MUSA 266	History of Popular Music
MUSA 267	Jazz History and Literature (not approved for gtPathways)
THEA 141	Theatre Appreciation
THEA 145	Introduction to Dramatic Literature

Natural Sciences

* BIOL 101, 101L	General Human Biology and Lab
* BIOL 102, 102L	Plant and Animal Biodiversity and Lab
* BIOL 105, 105L	Attributes of Living Systems and Lab
BIOL 108, 108L	Diversity of Organisms
* BIOL 250, 250L	Introduction to Microbiology and Lab
CHEM 100	Chemistry and Society
* CHEM 121, 121L	Principles of Chemistry and Lab
* CHEM 122, 122L	Principles of Organic Chemistry and Lab
* CHEM 131, 131L	General Chemistry and Lab
* CHEM 132, 132L	General Chemistry and Lab
ENVS 101	Introduction to Environmental Science
* ENVS 103, 103L	Field-Based Introduction to Environmental Science
GEOL 100	Survey of Earth Science
GEOL 103	Weather and Climate
GEOL 104	Oceanography
GEOL 105	Geology of Colorado
GEOL 106	Introduction to Dinosaurs
GEOL 107	Natural Hazards and Environmental Geology
GEOL 108	Water, People and Environment
* GEOL 111, 111L	Principles of Physical Geology and Lab
* GEOL 112, 112L	Principles of Historical Geology and Lab
* GEOL 113, 113L	Field-Based Introduction to Physical Geology and Lab
PHYS 100	Concepts of Physics
PHYS 101	Elementary Astronomy
* PHYS 105, 105L	Physics by Inquiry and Lab
* PHYS 111, 111L	General Physics and Lab
* PHYS 112, 112L	General Physics and Lab
* PHYS 131, 131L	Fundamental Mechanics and Lab
* PHYS 132, 132L	Electromagnetism and Optics and Lab

* Only these courses fulfill the requirement of Natural Science with an associated lab or field component. Both the lecture and laboratory must be taken if essential learning credit or graduation credit is to be received.

Other Lower Division Requirements for Baccalaureate Degrees

In addition to the Essential Learning Core requirements described in the previous section, students pursuing a CMU baccalaureate degree must meet other lower division requirements as described below.

Essential Learning Capstone

Students are required to complete between 45 and 75 credit hours of coursework before enrolling in the four credits associated with the co-requisite Milestone and Speech courses:

ESSL 290	Maverick Milestone (3 semester credit hours)
ESSL 200	Essential Speech (1 semester credit hour)

See the Maverick Milestone policies included in the General Undergraduate Academic Policies section.

Wellness Requirement

Each student must take KINE 100 plus either one or two activity courses, as specified on the program sheet for each major. The only exception to taking KINE 100 are those students who request and pass a proficiency test at least at the 80 percent level. Contact the Kinesiology Department Head or the CMU Testing Center for additional information.

Up to six KINA courses (excluding varsity athletics) may be taken as electives toward graduation with a baccalaureate degree.

Each course is scheduled for an eight-week module and designed to emphasize and assess basic skills, related knowledge, and the importance of physical activity in promoting and maintaining personal health. Students learn and apply health fitness concepts while gaining skills relating to the specific activity. Throughout the eight weeks, students complete various assignments designed to encourage physical activity, healthy lifestyle changes, and application health and fitness concepts. Prerequisites for all "Intermediate" or part II classes: the corresponding beginning course or instructor consent.

Courses approved for the Wellness requirement for baccalaureate degrees are as follows:

KINE 100	Health and Wellness
KINA 1XX	Activity Courses
DANC 154	Dance Team
DANC 160	Beginning Ballet
DANC 169	Beginning Modern
DANC 174	Beginning Jazz
DANC 177	Beginning Tap
DANC 180	Beginning Hip Hop Dance
MUSP 147	Marching Band

Note on Varsity Athletics: Only one varsity sport activity course numbered KINA 180-189 may be used to meet the Wellness activity requirement. Varsity athletics may not be used as elective credit.

Applied Studies

Students enrolled prior to Summer/Fall 2015 have the option of completing CMU's previous Applied Studies requirement (3 semester credit hours from the following list of approved courses) instead of CMU's current Essential Learning Capstone requirement.

ACCT 201	Principles of Financial Accounting
BUGB 101	Introduction to Business
BUGB 249	The Business of Life
CISB 101	Business Information Technology
CSCI 100	Computers in Our Society
CSCI 106	Web Page Design I
ENGL 219	Introduction to Professional Writing
FLAF 111, 112	First-Year French I, II
FLAG 111, 112	First-Year German I, II
FLAS 111, 112	First-Year Spanish I, II
FLGK 111, 112	Introductory Greek I, II
FLLT 111, 112	Introductory Latin I, II
FLSL 111, 112	American Sign Language I, II
FLAJ 111, 112	Beginning Japanese I, II
GEOG 131	Introduction to Cartography
HSCI 101	Introduction to the Health Care Professions
KINE 265	First Aid/CPR for the Professional Rescuer
PHIL 275	Introduction to Logic
*SPCH 101	Interpersonal Communication
*SPCH 102	Speechmaking
SPCH 112	Voice and Diction
TSTG 120	Industrial Safety Practices

*If not used for the Essential Learning Core.

Upper Division Requirements

Students seeking a baccalaureate degree must earn a minimum number of upper-division semester credit hours (numbered between 300 and 499), depending on the degree and major.

A minimum of 40 semester credit hours is required for all Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Music Education, Bachelor of Science, Bachelor of Business Administration and Bachelor of Social Work degrees. Students seeking a Bachelor of Science in Nursing or Bachelor of Applied Science should refer to their program sheet for the minimum upper-division credit hour requirement.

Degree-Specific Requirements and Degree Category

The requirements below are separate from and in addition to the Essential Learning requirements (i.e., the same course cannot be used for Essential Learning, degree category and/or other major requirements) and are included in the foundation courses or major courses. When applicable, the requirements are a part of a major's requirements and must be completed with a grade of "C" or higher.

Bachelor of Arts and Bachelor of Fine Arts

Candidates for the BA degrees shall complete six sequential semester hours of one classical or modern foreign language with a grade of "C" or higher. At the discretion of the foreign language faculty and with the approval of the department

head, the requirement may be satisfied by demonstration of equivalent competency. Students with two or more years of high school coursework in a foreign language may (1) see the department head for placement in a higher level class; (2) receive credit by successful completion of a CLEP test in that language; or (3) pursue another language.

Bachelor of Fine Arts degrees may or may not have a one or two semester foreign language requirement as described above. See program sheet.

Bachelor of Science and Bachelor of Science in Nursing
Candidates for the BS and BSN degrees shall complete at least three semester hours of the following: one additional course chosen from any computer science (CSCI), any statistics (STAT) or another mathematics (MATH) course considered higher level than College Algebra (MATH 113). Candidates must complete each of these courses with a grade of "C" or higher. At the discretion of the mathematics and computer science faculty, the requirement may be satisfied by a demonstration of equivalent competency.

Bachelor of Social Work
Candidates for the BSW degree must meet the same foreign language requirements as those listed for the BA (see above).

Bachelor of Applied Science
In order to obtain a Bachelor of Applied Science (BAS) degree from Colorado Mesa University, the following requirements apply. All BAS students are required to meet with the department BAS advisor in order to plan and schedule all classes.

- Formal admission to a BAS program requires completion of the appropriate AAS degree from an accredited institution. Any exceptions to this must be approved in advance by the department BAS advisor and the department head.
- In order to meet course prerequisites, additional courses may be required. Please meet with the BAS advisor to insure all prerequisites are completed.
- If a student decides to pursue a four-year degree that is not the BAS, technical credits transferred from another institution will be counted only as electives, with the number of hours determined through a course evaluation completed by the academic department head in collaboration with the CMU's Registrar's Office.
- Students who transfer in credits from a recognized technical program must complete the requirements for an AAS degree before their technical training will be recognized for credit in the appropriate BAS program. Applicants from a non-regionally-accredited institution must meet all Essential Learning program and total credit hour requirements from a regionally-accredited institution prior to graduation from Colorado Mesa with a BAS program.
- The requirement of at least 33 hours of upper division coursework must be met by all students seeking a BAS degree, with the exception of a BAS is awarded in an interdisciplinary program.
- Students are required to participate in exit examinations, assessments, and any other programs deemed necessary to comply with the college accountability requirement.

A list of specific requirements for each BAS degree is available from the appropriate academic department head of the BAS program and the Transfer Resources section of the University's web site.

Requirements for Teacher Licensure

Students preparing to teach in the public schools (elementary, secondary, K-12) must contact both the Colorado Mesa University Center for Teacher Education regarding state licensure requirements and the appropriate department head regarding program requirements for the major. It is crucial that students seeking teacher licensure plan their schedules with their advisors early in their academic careers, preferably the first semester of their work at Colorado Mesa University.

Teacher licensure is a separate process and must be pursued in addition to a baccalaureate degree. See the section on Center for Teacher Education.

Additional Options While Earning a Baccalaureate Degree

Multiple Concentrations within One Degree
Under many of the baccalaureate degrees, concentrations are available. Before graduating with a baccalaureate degree, a student may complete requirements for one or several of the concentrations as desired. However, after a degree has been awarded, if courses are taken that would have satisfied requirements for an additional concentration, the additional concentration cannot be added to the degree already awarded.

Students wishing to receive multiple concentrations within one degree must satisfy all the requirements for each concentration. Only one degree will be awarded. All concentrations must be declared on the petition to graduate.

Second Baccalaureate Degree
A student seeking a second baccalaureate degree at Colorado Mesa University must earn a minimum of 30 additional semester hours of credit, at least 18 of which must be in courses numbered 300 and higher. None of these 30 credits may have been used toward another baccalaureate degree, and all must be earned at Colorado Mesa University. In addition, the student must satisfy all specific program requirements of the new degree and concentration as well as any graduation requirements not previously met (e.g., the degree category). Students with a baccalaureate degree who are pursuing a second baccalaureate degree from Colorado Mesa University are exempt from the Wellness and Essential Learning Capstone requirements.

Requirements for a Minor
A minor is an approved program of study to broaden the scope of the educational experience and can be awarded with any baccalaureate degree. A minor, if chosen, must be outside the major field of study. Students are urged to consult a faculty advisor and to obtain a program sheet for the minor sought. A minor is not a degree by itself and must be earned at the same time as a baccalaureate degree. A student may earn up to five minors with any bachelor's degree at Colorado Mesa University.

Houston Hall

A minor consists of 15-24 semester hours. There may be prerequisites required for the minor which will increase the total number of credit hours for a student who has not already taken those prerequisites. Since a minor is optional, courses taken to satisfy Essential Learning, major requirements, or electives can be counted toward the minor if applicable. At least 33 percent of the minor must be in courses numbered 300 or above and at least 25 percent of the classes must be taken at Colorado Mesa University. A cumulative grade point average of 2.00 or higher for the courses used for the minor must be achieved.

Colorado Department of Higher Education Statewide Guaranteed Transfer Courses

Colorado Mesa University has 84 Essential Learning courses approved for guaranteed transfer and accepts nearly 500 courses from other Colorado public institutions of higher education. Guaranteed transfer courses are universally transferable across the institutions and are applicable to Essential Learning/General Education requirements within all associate and baccalaureate degree programs.

Courses approved through Colorado's gtPathways, the state's guaranteed transfer program, are grouped into five content areas, four of which have sub groupings:

Arts and Humanities:
GT-AH1 - Arts and Expression
GT-AH2 - Literature and Humanities
GT-AH3 - Ways of Thinking
GT-AH4 - Foreign Languages (intermediate, i.e., 200-level)

Communication:
GT-CO1- Introductory Writing
GT-CO2 - Intermediate Writing
GT-CO3 - Advanced Writing

Mathematics: GT-MA1
Note: no subgroups

Natural and Physical Sciences:
GT-SC1 - with required laboratory
GT-SC2 - without required laboratory

Social and Behavioral Sciences:
GT-HI1 - History
GT-SS1 - Economic or Political Systems
GT-SS2 - Geography
GT-SS3 - Human Behavior, Culture, or Social Frameworks

All courses (except as noted) listed under the "Core Courses Approved for the Essential Learning Program Requirements" section in addition to STAT 200 have been approved by the Colorado Department of Higher Education (CDHE) as guaranteed transfer courses. They also are designated in the course descriptions at the back of this catalog. More information is available at the CDHE website at highered.colorado.gov/academics/transfers/ students.html as well as from the CMU Registrar's Office or a faculty advisor.

Requirements for Associate Degrees

Associate of Arts (AA)
Associate of Science (AS)
Associate of Applied Science (AAS)

Credit Hour Requirements
For most associate degrees, 60 semester credit hours in approved course work must be earned. A cumulative grade point average of 2.00 or higher must be achieved for all courses including those which comprise the area of emphasis. Some programs have additional GPA requirements.

Academic Residency for Associate Degrees
To receive an associate degree from Colorado Mesa University, students must complete a minimum of 15 of the final 30 semester hours of credit through Colorado Mesa University.

Associate of Arts (AA) and Associate of Science (AS) Degree Requirements
AA and AS degree programs are designed to prepare students for transfer into upper division collegiate work (junior level) in colleges and universities granting the Bachelor of Arts (BA) or Bachelor of Science (BS) degree. The AA degree is structured for transfer into a baccalaureate degree program, with junior standing, in the arts, humanities, social or behavioral sciences, or one of the professional fields with such disciplines as its base. The AS degree is designed for transfer into a baccalaureate degree program, with junior standing, in one of the mathematical, biological, or physical sciences, or in one of the professional fields with such disciplines as its base.

CMU's Essential Learning Core coursework for all AA and AS degree programs aligns with the Colorado Statewide General Education Core and will thus meet the lower-division General Education requirements of most baccalaureate degree programs at public institutions in Colorado. A grade of "C" or higher is required in each Core course in order to be accepted for transfer under the Core Transfer Agreements.

Students should consult with their faculty advisors to assure that the emphasis and electives chosen will satisfy requirements of the particular baccalaureate programs to which they plan to transfer.

In general, coursework for the AA or AS degree includes:

1. Completion of the university's 31 credit hour Essential Learning Core which fulfills the state's General Education curriculum. The same English and mathematics requirements specified for baccalaureate-seeking students also apply to those pursuing an AA or AS degree.

   Students pursuing an AA or AS degree do not have to complete the 4 credit hour Essential Learning Capstone unless they transfer into a baccalaureate degree program. Once a student makes the transition to a baccalaureate program, the Essential Learning Capstone requirements take effect and should be completed in the earliest possible semester after which 45 credit hours have been earned.

   Students enrolled prior to summer/fall 2015 have the option of completing CMU's previous Applied Studies requirement (3 semester credit hours) instead of the current Essential Learning Capstone requirement (4 semester hours). For a list of approved Applied Studies courses, see the entry under the "Other Lower Division Requirements" section for baccalaureate degrees.

   Specific information about the Essential Learning content areas, required hours and courses is found under the baccalaureate section "Essential Learning Core Course Requirements" and "Core Courses Approved for the Essential Learning Program Requirements."

2. Other lower division requirements. For the Wellness requirement, an associate degree seeking student must earn two semester credit hours in Kinesiology. In addition to KINE 100, a student also must complete one activity course which include: KINA 1XX, DANC 160, 169, 174, 177, 180, and MUSP 147. Up to three KINA courses (excluding varsity athletics) may be taken as electives toward graduation with an associate degree.

   Students seeking an associate degree must complete the Essential Learning Core, but do not have to enroll in the Capstone coursework until they formally declare a major in a baccalaureate degree. Students enrolled prior to Summer/Fall 2015 have the option of completing CMU's previous Applied Studies requirement (3 semester credit hours) instead of CMU's Essential Learning Capstone requirement. Applied Studies courses are not considered part of the Essential Learning Core for AA or AS degree programs. See the list of courses approved for Applied Studies in the baccalaureate section of this chapter.

3. Discipline classes (emphasis). Consult with a faculty advisor.

4. Electives. May be required to meet the minimum 60 hours. See program sheet.

Associate of Applied Science (AAS) Degree Requirements
AAS degree programs are intended to prepare individuals to enter skilled and/or para-professional occupations or to upgrade/stabilize their employment. With the exception of the Bachelor of Applied Science degree, these programs generally are not intended for transfer to baccalaureate degree programs. Selected courses, however, may be accepted toward a baccalaureate degree at some institutions. The AAS degrees available at Colorado Mesa University, along with the courses required to complete each degree, are described in the Programs of Study section in this catalog. Students should consult a faculty advisor on specific degree requirements.

Required coursework for an AAS degree includes:

1. Essential Learning courses (15 semester credit hours)
   While some courses may be specified for a major, the following minimum requirements apply:

a. 3 semester hours of Mathematics:
   - MATH 107 or higher

Note: MATH 107 and MATH 108 do not meet the mathematics Essential Learning (General Education) requirement for students who subsequently elect to pursue an AA, AS, or a baccalaureate degree.

b. 6 semester hours of Communication:
   - ENGL 111 and
   - ENGL 112 or SPCH 101 or SPCH 102

c. 6 semester hours of other Essential Learning Core courses:
   - 6 semester hours Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities.

2. Wellness Requirement: 2 semester hours
   For the Wellness requirement, an associate degree seeking student must earn two semester credit hours in Kinesiology. In addition to KINE 100, a student also must complete one activity course which include: KINA 1XX, DANC 160, 169, 174, 177, 180, and MUSP 147. Up to three KINA courses (excluding varsity athletics) may be taken as electives toward graduation with an associate degree.

3. Additional lower division requirements as relevant to some degrees, e.g. prerequisites.

Double Emphasis within an Associate Degree

Students who elect to pursue a double emphasis within one degree must satisfy all the requirements for each emphasis. Only one associate degree will be awarded, and all emphases must be declared on the petition to graduate.

Second Associate Degree

A minimum of 15 semester hours of credit beyond that required for the first associate degree must be earned by a student seeking a second associate degree at Colorado Mesa University. A minimum of one semester of residency at Colorado Mesa University is also necessary. In addition, the student must satisfy all specific requirements for the new degree. Only one AA and only one AS degree may be granted to any student.

Requirements for Undergraduate Certificates

Professional Certificate Requirements

Colorado Mesa University offers upper division, professional certificates for students interested in broadening their knowledge and/or enhancing job-related skills in a professional field of study. The requirements for professional certificates vary and include coursework in a discipline in addition to a mix of lower division Essential Learning Courses. Candidates for a Professional Certificate at Colorado Mesa University must satisfy all requirements specified on the certificate's program sheet with a cumulative grade point average of 2.00 or higher for all courses. A grade lower than a "C" in the program of study will not be counted toward meeting the certificate's requirements. To meet academic residency at least fifty percent of the credit hours for the certificate must be earned through Colorado Mesa University. Students should contact the appropriate academic department head for specific certificate requirements.

Technical Certificate Requirements

Candidates for a Technical Certificate at Colorado Mesa University must satisfy all requirements specified on the certificate's program sheet with a cumulative grade point average of 2.00 or higher for all courses. A grade lower than "C" in the program of study will not be counted toward meeting the certificate's requirements. To meet academic residency, at least fifty percent of the credit hours for the certificate must be earned through Colorado Mesa University.

WCCC Transportation Services

Programs of Study

Acceptance of registration by Colorado Mesa University and admission to any education program at the University does not constitute a contract or warranty that the University will continue to offer the program in which a student is enrolled. The University expressly reserves the right to change, phase out or discontinue any program. The listing of courses contained in any University bulletin, catalog or schedule is by way of announcement only and shall not be regarded as an offer of contract. The University expressly reserves the right to:

1. add or delete programs and/or courses from its offerings,
2. change times or locations of courses or programs,
3. change academic calendars without notice,
4. cancel any course for insufficient registrations, or
5. revise or change rules, charges, fees, schedules, courses, requirements for degrees, and other policies or regulations affecting students, including, but not limited to, evaluation standards, whenever the same is in the best interests of the University.

NOTE: Date in parentheses following faculty member's name indicates the first calendar year of a full-time faculty appointment at Colorado Mesa University or Western Colorado Community College. Only full time faculty are listed; prior temporary or part-time service is not indicated. Faculty members with a temporary appointment do not have a year listed.

NOTE: Students should consult the Financial Aid Office for eligibility requirements of undergraduate & graduate certificates.

Assessment of Student Learning

Colorado Mesa University is committed to providing quality education for students across all disciplines through a supportive learning environment. Assessment of student learning is a process used by program faculty to measure student progress in the knowledge and skills necessary to be successful after graduation. All students will participate in the process by engaging in assessment activities through submitting course assignments, taking examinations, completing surveys or writing standardized tests. Evidence collected through assessment assists faculty in program improvement at the certificate, undergraduate and graduate level.

Student learning at CMU is centered on specialized knowledge and applied learning in the discipline as well as the intellectual skills of communication fluency, quantitative fluency and critical thinking. Part of assessment also involves student learning at the co-curricular level in areas such as student life or service learning. Students will be expected to participate in assessment and provide honest feedback for evaluation. Data gathered will be evaluated in aggregate form and reported to respective members of the CMU community as well as accreditation organizations. Assessment is a key element to improve teaching and learning, and to enhance the quality of programs at the University.

ACCOUNTING

PROGRAM DESCRIPTION

Bachelor of Science + Master of Business Administration (3+2)
Bachelor of Science
Accounting – Public Accounting
Accounting – General Accounting
Minor
Accounting

Program Description

Accounting is a degree with 360 degrees of possibilities. Every business needs accounting expertise, whether it's a Wall Street law firm, a professional sports team, a movie production company or a rock band. With the proper accounting education, employment options are endless.

The public accounting degree provides students with basic business skills as well as the accounting knowledge needed to pass the Certified Public Accountant (CPA) exam. Graduates of CMU's program have a very high CPA exam pass rate and are heavily recruited by local and regional CPA firms.

The general accounting concentration is designed for undergraduate students who do not wish to pursue CPA certification. This program provides students with basic business skills as well as accounting knowledge needed to work in an accounting department in private industry or government.

The accounting minor offers students majoring in other areas the opportunity to enhance their degrees with basic accounting knowledge. Since all businesses rely heavily on accounting functions, graduates with a minor have a competitive advantage, particularly in the area of decision making. Accounting is the language of business and regardless of major, the more accounting, the better prepared students will be for management positions.

Learn more about the programs of study listed here, and find program sheets detailing exact and complete requirements for majors and concentrations, online at ***coloradomesa.edu/academics****.*

The accounting program also offers an option of a five year (3+2) program which allows students to graduate with a Bachelor of Science in Accounting and a Master of Business Administration. This combination prepares students to earn the hours needed to earn the CPA. Through careful planning and coordination, students can complete their four-year degree and begin their graduate degree, finishing both simultaneously.

SPECIAL REQUIREMENTS
To be admitted to the accounting program at Colorado Mesa University, students must meet certain requirements. Contact the Department of Business for specific requirements. Note that admission to the University does not guarantee admission to the program.

1. Prior to admission, potential accounting majors will be given the classification code for "pre-accounting." To be eligible for admission to the program, a student must have successfully completed the following:
   a. 30 credit hours (entering freshmen are not eligible) with a 2.75 GPA or higher;
   b. Freshman English (ENGL 111 and 112)
   c. Nine hours of the Essential Learning requirements, excluding the English requirement listed above;
   d. College Algebra (MATH 113) or higher;
   e. Business Information Technology (CISB 101);
   f. Principles of Management (MANG 201);
   g. Financial and Managerial Accounting (ACCT 201 & 202) with a minimum 2.5 GPA.
2. An application for admission should be submitted to the Accounting Program Admission Committee when the above requirements have been met. Specific admission information may be obtained from the department. Only students admitted to the Accounting Program will be allowed to enroll in upper division accounting courses with the exception of Intermediate Accounting I and II and/or Cost Accounting I and II.
3. A grade of "D" in any one of the courses specifically identified above is not acceptable.
4. Exceptions to any of the above requirements may be made by the Admissions Committee in special circumstances.

CONTACT INFORMATION
Department of Business, Dominguez Hall 309,
970.248.1778.

FACULTY

CRAIG FOSSETT (2004), Assistant Professor of Accounting and Faculty Athletic Representative; BA, University of Missouri; MBA, Western State College.

GEOFFREY GURKA (2001), Professor of Accounting; BA, University of Connecticut; MA, Florida State University; PhD, Michigan State University.

SUZANNE LAY (2006), Associate Professor of Accounting; BS, Norfolk State University; MBA, University of Missouri-Kansas City; MSEd, Emporia State University.

MICHAEL PHILIPP (2012), CPA, CVA, CDFA, CMCA, Instructor of Accounting; MAcct, University of Central Arkansas; MBA in Economics equivalent, Univeristy of Kassel in Kassel, Germany.

ADDICTION STUDIES

PROGRAMS OFFERED
Minor
Addiction Studies

PROGRAM DESCRIPTION
This minor will provide students the knowledge and skills that are in high demand in all aspects of the behavioral health field. Students receiving this minor will be provided with the latest evidence-based practices, research studies and best practices in the field of addictions. This 24 credit hour minor is offered to meet educational requirements that are needed for the Certified Addiction Counselor (CAC) II training as outlined by the Colorado Department of Human Services (CDHS), Office of Behavioral Health (OBH). These courses seek to enhance the student's counseling abilities, knowledge and competencies in becoming an addictions professional. By completing the educational requirements of this minor, students are eligible to take the National Association for Addictions Professionals (NAADAC) NCAC I or NCAC II exam for CAC II certification as required in Colorado. All required classes seek to enhance the student's ability to offer addiction treatment services in a manner that respects gender, race and ethnicity, sexual orientation, cultural, familial, systemic and socioeconomic diversity.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

AGRICULTURE SCIENCE

PROGRAMS OFFERED
Associate of Science
Agriculture Science

PROGRAM DESCRIPTION
The Agriculture Science curriculum is designed to provide students the fundamentals of agriculture and related business practices. With this degree, students will be well positioned to transfer into a bachelor degree program in agriculture. Graduates are qualified for employment in a variety of positions associated with sustainable agriculture, including horticultural and livestock operations, wholesale and retail management, nursery operations, and environmental and agricultural education.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

ANIMATION, FILM, PHOTOGRAPHY, AND MOTION DESIGN

PROGRAMS OFFERED

Bachelor of Fine Arts

Animation, Film, Photography, and Motion Design

PROGRAM DESCRIPTION

The Bachelor of Fine Arts degree in Animation, Film, Photography, & Motion Design focuses on the study of time, motion and light. Coursework concentrates on traditional and digital 2D and 3D narrative animation; digital filmmaking; sound production; creation of motion visuals for gaming, entertainment, music videos, advertising; and storytelling. Storytelling within these areas takes a student's vision and turns it into visual communication that can be produced and distributed via film, television, mobile devices, and the Web. Graduates are prepared to become animators, filmmakers, motion designers, storyboard artists, character designers, modelers, visual effects artists, concept artists, script writers, producers, editors, and cinematographers.

CONTACT INFORMATION

Department of Art and Design, Fine Arts Building 200, 970.248.1833.

FACULTY

CAROLYN QUINN-HENSLEY (2000), Professor of Art; BFA, MFA, University of Hawaii.

APPLIED BUSINESS

PROGRAMS OFFERED

Associate of Applied Science

Administrative Support
Frontline Supervision
Marketing Communication

Technical Certificate

Administrative Support
Business Foundations
Graphics Technology
Frontline Supervision
Marketing Graphics Technology
Office Technology

PROGRAM DESCRIPTION

This program prepares students for an exciting career in the field of business. An Associate Degree gives students an opportunity to lead a team start a business and develop skills to improve an existing business.

The Applied Business program at Western Colorado Community College features:

- Technical, interpersonal and soft skill courses that prepare students to enter the workforce.
- Course content that is relevant to today's business needs. Training is focused on current business needs, diverse learning styles, hands-on classroom experience and practical program-related work.
- Small class sizes ensure students receive the level of instruction that needed to excel in today's business world.
- Traditional classroom instruction and classes offered at night or online.
- Flexible curriculum that includes several one-semester Technical Certificates.
- An agreement with Colorado Mesa University's Department of Business enabling students who complete a two-year degree to seamlessly move to CMU to earn a Bachelor of Applied Science in Business Administration.

CONTACT INFORMATION

Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

FACULTY

STEVEN TYLER LIFF (2016), Technical Instructor of Applied Business; AAS, Colorado Mesa University; BS, MS, Colorado State University.

ARCHAEOLOGY

(ALSO SEE CULTURAL RESOURCE MANAGEMENT)

PROGRAMS OFFERED

Minor

Archaeology

PROGRAM DESCRIPTION

The archaeology minor introduces students to the knowledge and skills necessary to carry out archaeological investigations. The curriculum focuses on the archaeology of North America and supplies hands-on training in field methods and cultural resource management. The minor especially complements such degree programs as history and geology. Students with the background supplied by the minor will be well prepared to enter the burgeoning local market in heritage management.

CONTACT INFORMATION

Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

JOHN SEEBACH (2014), Assistant Professor of Archaeology; BA, University of Texas at El Paso; MA, PhD, Southern Methodist University.

ART

PROGRAM DESCRIPTION

Bachelor of Arts

Studio Art

Bachelor of Fine Arts

Art – Art History
Art – (K-12) Education
Art – Studio Art

Minors

Studio Art

Learn more about the programs of study listed here, and find program sheets detailing exact and complete requirements for majors and concentrations, online at ***coloradomesa.edu/academics****.*

PROGRAM DESCRIPTION
The Bachelor of Arts degree in Studio Art is designed for students interested in studio art that do not want to pursue graduate level studies. Numerous career paths for candidates who complete this degree would include owning and operating a gallery, art therapy (combined with a psychology minor/major), working as an artist exhibiting artwork or being involved with artist residencies. Students can customize their course selections to meet their individual needs and be well prepared to enter the field for jobs that require a studio art education. Students pursing a Bachelor of Art in Art degree are not required to participate in a senior exhibition.

The Bachelor of (BFA) in Art with a concentration in art history combines strong curriculum requirements in both studio and art history courses. Students in this major develop advanced skills in particular studio techniques and engage in in-depth study of historic and contemporary artists, art movements and styles. This degree can lead to professional employment in art museums and galleries, art publishing houses and other areas of art services. The degree also prepares students for advanced, graduate-level art history studies.

The BFA in Art, concentrating in K-12 education, leads to licensure for Colorado K-12 art education. The visual art emphasis includes coursework in theory, art history and studio art. Art teaching methods courses in elementary and secondary art are an integral part of the degree plan. Students accumulate over 200 hours of classroom experience before beginning student teaching. School districts throughout western Colorado provide opportunities to gain experience with children of all ages and backgrounds in a variety of school settings. Please see the Teacher Education Admission Packet for further information on admissions criteria.

The BFA in Art with a concentration in studio art combines strong curriculum requirements in design, drawing, studio and art history. Students develop skills and aesthetic judgment in the materials, techniques and tools within drawing, painting, printmaking, ceramics or sculpture studio arts. Art history studies engage students in historic and contemporary artists, art movements and styles. The degree culminates in a required senior gallery exhibition, and upon graduation, students are prepared to pursue a career as an artisan or continue with graduate studies in art.

The studio art minor acquaints students with some of the core elements in either two- or three-dimensional art studio media. Students develop skills, sensitivity and aesthetic judgment while pursuing individual interests within studio areas such as drawing, painting, printmaking, ceramics or sculpture. A background in the visual arts can provide a variety of opportunities in the areas of studio art, art gallery organizations and applied design.

CONTACT INFORMATION
Department of Art and Design, Fine Arts Building 200, 970.248.1833.

FACULTY

JOSHUA BUTLER (2006), Associate Professor of Art; BFA, MFA, Colorado State University.

ERIC ELLIOTT (2015), Assistant Professor of Art; BFA, University of California, Berkley; MFA, University of Washington, Seattle.

SUZIE GARNER (1995), Professor of Art and Department Head of Art; BFA, MA, Stephen F. Austin State University; MFA, West Texas A&M.

ELI MARCO HALL (2012), Assistant Professor of Art; BFA, Missouri State University; MFA, Colorado State University; MA, Lindenwood University.

ALISON HARRIS (2012), Assistant Professor of Art; BA, University of California, Davis; BFA, Sonoma State University; MEd, National University; MFA, California State University, Long Beach.

KYOUNGHWA OH (2013), Assistant Professor of Art; BFA, Washburn University; MFA, Southern Illinois University - Carbondale.

CAROLYN QUINN-HENSLEY (2000), Professor of Art; BFA, MFA, University of Hawaii.

ARAAN SCHMIDT (2012), Assistant Professor of Art; BFA, Kansas City Art Institute; MFA, University of Minnesota.

ATHLETIC TRAINING

PROGRAMS OFFERED
Bachelor of Science
Athletic Training

The Athletic Training Program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). The program has been placed on probation as of February 24, 2017 by the CAATE, 6850 Austin Center Blvd., Ste. 100, Austin, TX 78731-3101. The program is voluntarily withdrawing its accreditation effective May 2019 and admitted its last cohort of undergraduate students during Spring 2017.

Learn more about the programs of study listed here, and find program sheets detailing exact and complete requirements for majors and concentrations, online at ***coloradomesa.edu/academics****.*

CONTACT INFORMATION
Department of Kinesiology, Maverick Center 237B, 970.248.1635.

FACULTY

RICHARD BELL (2005), Instructor of Kinesiology; BS, Clemson University; MA, The Citadel; JD, University of South Carolina; EdD, United States Sports Academy.

JILL CORDOVA (1992), Professor of Kinesiology; BA, MA, Humboldt State University; PhD, University of New Mexico.

CARMINE GRIECO (2015), Assistant Professor of Kinesiology; BS, University of Wyoming; MS, PhD, Old Dominion University.

JEREMY HAWKINS (2013), Associate Professor of Kinesiology and Department Head of Kinesiology; BS, Brigham Young University; MS, Oregon State University; PhD, Brigham Young University.

KRISTIN HEUMANN (2011), Associate Professor of Kinesiology; BA, Northwestern College; MS, PhD, Arizona State University.

ERIN LALLY (2016), Instructor of Kinesiology; BS, MS, Illinois State University.

STEVEN ROSS MURRAY (1998), Professor of Kinesiology; BS, University of North Alabama; MS, DA, Middle Tennessee State University.

MICHAEL REEDER (2015), Acting Director Monfort Family Human Performance Laboratory; BS, Youngstown State University; DO, Ohio University Heritage College of Osteopathic Medicine.

ELIZABETH SHARP (2011), Associate Professor of Kinesiology; BS, MEd, Arkansas Tech University; PhD, Middle Tennessee State University.

AVIATION TECHNOLOGY

PROGRAMS OFFERED
Associate of Applied Science
Aviation Technology-Fixed Wing

PROGRAM DESCRIPTION
The AviationTechnology program prepares the students for FAA certification as a Commercial Pilot with an Instrument Rating, and as a Certified Flight Instructor. In addition, the program offers opportunities to enhance knowledge and expertise in the aviation field by improving technical skills. Successful completion of the program allows students to transition into a Bachelor of Science in Aviation.

Requirements for admission to the program:
1. Must complete all Developmental Education requirements prior to starting the program.
2. Submit a copy of birth certificate to establish U.S. Citizenship
3. Complete a flight physical exam with an FAA-designated Aviation Medical Examiner. Recommend a second class medical certificate minimum. To help locate a qualified doctor go to: http://ame.cami.jccbi.gov for a list by city and state.

VA benefits cannot be used to obtain your initial FAA Certification as a Private Pilot but will cover the cost of the minimum required flight hours listed for the Instrument Rating, Commercial Pilot Certificate, and Certified Flight Instructor Certificate.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

FACULTY
DANIEL ASHTON (2014), Technical Instructor of Aviation Technology; BS, Southeast Missouri State University; MA, Webster University; MA, Embry-Riddle Aeronautical University; MBA, Webster University.

BAKING AND PASTRY

PROGRAMS OFFERED
Associate of Applied Science
Baking and Pastry
Technical Certificate
Bakeshop Production

PROGRAM DESCRIPTION
This program will prepare students for employment in the field of baking and the art of pastries. The Associate of Applied Science program will develop the students' skills and understanding in the production of chocolates, confections, pastries, ice creams and frozen desserts, yeast products, quick breads, sculpted items, sugar work, use of fruits and international desserts. Business and management courses to be taken include nutrition, purchasing, supervision, and business information technology.

Learn more about the programs of study listed here, and find program sheets detailing exact and complete requirements for majors and concentrations, online at ***coloradomesa.edu/academics****.*

Upon completion of the program, students will be prepared for an entry-level position in the broad and expanding hospitality industry as well as prepared to continue for advanced study in the Bachelor of Applied Science in Hospitality Management.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

FACULTY

DEBORAH HENDERSON (2014), Technical Instructor of Baking and Pastry; AA, Mesa State College.

BIOLOGICAL SCIENCES

(ALSO SEE FORENSIC SCIENCE)

PROGRAMS OFFERED

Bachelor of Science
- Biological Sciences – Biology
- Biological Sciences – Cellular, Molecular, and Developmental Biology
- Biological Sciences – Ecology, Evolution, and Organismal Biology
- Biological Sciences – Secondary Education

Associate of Science
- Biology Emphasis

Minor
- Biology

PROGRAM DESCRIPTION
The Bachelor of Science degree with a biological science major provides a broad background in the biological sciences. Students choose biology courses from four areas: cell, developmental and molecular biology; anatomical and physiological biology; organismal biology; and ecology, evolution and systematics. The biology concentration also offers field courses on tropical ecosystems in Ecuador and on marine invertebrate communities in Oregon. Graduates of our program pursue careers in the medical field, plant pathology, wildlife biology, cell biology or biotechnology, among just a few of the career options available with a biology degree from Colorado Mesa University.

Students wishing to obtain teacher certification complete a concentration in secondary education leading to teacher licensure. Graduates of the program can teach in the state of Colorado or use their teaching expertise in other careers. After completing foundation sciences classes in biology, chemistry, physics and geology, students choose 10 hours of upper level biology course work, in consultation with their advisor.

CONTACT INFORMATION
Department of Biological Sciences, Wubben Science 232, 970.248.1993.

FACULTY

MARGOT BECKTELL (2008), Associate Professor of Biological Sciences; BS, Mesa State College; PhD, Cornell University.

KELLY JEAN CRAIG (2012), Associate Professor of Biological Sciences; BS, University of Kansas; PhD, Georgetown University.

TRACY CYR (2011), Instructor of Biological Sciences; BS, University of California; MS, Washington State University; PhD, University of Missouri.

PAUL HAMPTON (2012), Associate Professor of Biological Sciences; BS, Eastern Illinois University; MS, University of Texas at Tyler; PhD, University of Louisiana at Lafayett.

ERIEK HANSEN (2013), Assistant Professor of Biological Sciences; BS, MS, Utah State University; PhD, University of Wyoming.

SUSAN LONGEST (2011), Associate Professor of Biological Sciences; BS, Cornell University; MS, PhD, University of Chicago.

STEPHANIE MATLOCK (1995), Instructor of Biological Sciences; BA, University of Colorado-Boulder; MS, Montana State University–Bozeman.

THERESA MCHUGH (2016), Assistant Professor of Biological Sciences; BS, University of Notre Dame; MS, PhD, Northern Arizona University.

DENISE MCKENNEY (1996), Professor of Biological Sciences; BS, New Mexico State University; PhD, North Carolina State University–Raleigh.

KYLE MCQUADE (2006), Associate Professor of Biological Sciences; BS, Millikin University; PhD, University of Wisconsin.

ZEYNEP OZSOY-BEAN (2011), Assistant Professor of Biological Sciences; BS, Bogazici University-Turkey; PhD, University of North Carolina–Chapel Hill.

APARNA PALMER (1999), Professor of Biological Sciences; BA, BS, Colorado State University; PhD, Washington State University.

MATTHEW STANSBURY (2014), Assistant Professor of Biological Sciences; BS, University of Nebraska at Omaha; PhD, Indiana University

STEPHEN STERN (2011), Associate Professor of Biological Sciences; BS, University of North Carolina–Asheville; PhD, University of Utah.

JOHANNA VARNER (2016), Assistant Professor of Biological Sciences; BS, Massachusetts Institute of Technology; PhD, University of Utah.

THOMAS WALLA (2001), Professor of Biological Sciences; BA, University of California–San Diego; PhD, University of Oregon–Eugene.

CARRIE MCVEAN WARING (1996), Professor of Biological Sciences and Department Head of Biological Sciences; BS, DVM, Colorado State University.

STEVEN WERMAN (1989), Professor of Biological Sciences; BS, MS, California State University–Long Beach; PhD, University of Miami.

SHAY WEST (2011), Instructor of Biological Sciences; BS, Mesa State College; PhD, University of Colorado-Denver.

BUSINESS

(ALSO SEE COMPUTER INFORMATION SYSTEMS, ENERGY MANAGEMENT/ LANDMAN, INSURANCE, AND HOSPITALITY MANAGEMENT)

PROGRAMS OFFERED

Master of Business Administration
Bachelor of Business Administration in Finance + Master of Business Administration (3+2)
Bachelor of Science in Construction Management + Master of Business Administration (3+2)
Bachelor of Business Administration
- Business Administration – Business Economics
- Business Administration – Emerging Markets
- Business Administration – Energy Management/Landman
- Business Administration – Entrepreneurship
- Business Administration – Finance
- Business Administration – Hospitality Management
- Business Administration – Human Resource Management
- Business Administration – Information Systems
- Business Administration – Insurance
- Business Administration – Management
- Business Administration – Managerial Informatics
- Business Administration – Marketing

Bachelor of Applied Science
- Business Administration

Associate of Arts
- Business Administration Emphasis

Professional Certificate
- Entrepreneurship

Technical Certificate
- Supervision

Minors
- Business Administration
- Economics
- Entrepreneurship

PROGRAM DESCRIPTION

Master of Business Administration
The MBA is a challenging degree that prepares graduates for the ever-changing business world. With a combination of theory and application of current business practices, classes provide students the opportunity to analyze actual business scenarios. See Graduate Policies and Programs section of this catalog for complete degree requirements.

Bachelor of Business Administration
The Bachelor of Business Administration (BBA) degree provides an in-depth study of the many facets of business. The program's extensive business core provides students with the knowledge, skills and abilities to compete in both local and global business environments. The business core covers functional areas of business and offers an applied approach, providing students with an opportunity to apply concepts and theories learned in class to real-life business projects. Students choose from the listed concentrations and gain additional depth in one or more areas.

The BBA is a very versatile and valuable degree. In addition to positions in corporate America, graduates hold positions in nonprofit organizations like hospitals, school systems and theaters and positions in organizations from entry-level manager to Chief Executive Officer. Colorado Mesa University's BBA graduates are entrepreneurs, small business owners, bank vice-presidents, product managers in advertising firms and project and operations managers in manufacturing organizations.

BBA Special Requirements
Prior to admission, potential BBA majors will be given the classification code for "pre-BBA". To be eligible for admission into the program, a student must meet additional requirements. Please contact the Department of Business for complete admission information

BBA Concentration(s) (Students must choose one)
Requirements vary with the concentration selected. See a online program sheet and Degree Works detailing complete requirements for the major and concentration.

Bachelor of Applied Science
The Bachelor of Applied Science (BAS) in Business Administration combines the technical skills and business proficiency necessary for success. A unique program, the BAS degree allows students who have already earned an Associate of Applied Science (AAS) degree to build upon their technical specialties with essential learning courses and junior and senior level business courses. This allows associate degree holders to gain a 4-year degree in approximately four additional full-time semesters, depending upon prior coursework. Business courses include courses in marketing, promotion, management, accounting, finance, small business management and entrepreneurship. Upon completion of the program, students will be technically and academically prepared for leadership positions in their chosen industries. Prospective students not holding an AAS degree can begin their university career at CMU in a chosen field of study with a 2-year degree and then progress to a 4-year degree using the BAS. This degree will provide students with the ability to move into supervision/management positions.

Associate of Arts
The Associate of Arts (AA) degree is designed for students who intend to continue their education and obtain a baccalaureate degree. The Business Administration AA degree, in addition to providing students with their essential learning courses, is useful in giving students an overview of business. The AA is also an appropriate choice for students who will take upper division coursework in the arts, humanities, or social and behavioral sciences. Through the acquisition of essential learning credits, the degree also positions students for completion of a four-year degree in business. The degree includes the Colorado Statewide General Education Core and meets the lower-division general education requirements at most public institutions in Colorado.

MINORS
Minors are designed to prepare non-business students with an overview of business knowledge, allowing students to combine other disciplines with necessary business skills. Four functional areas of business are covered in the minor with additional upper division courses required based upon the chosen minor.

Business Administration
The business administration minor complements many other degrees and is designed to prepare students to enter the world of business with the basic business skills needed to contribute more efficiently and effectively in the workplace. Courses in management, marketing and workplace communication provide students an opportunity to build a foundation in business. Additionally, courses in accounting, finance and computer information systems allow students to choose classes that best fit their career goals. A business administration minor coupled with a non-business major can increase the employment opportunities available in a variety of areas.

Economics
The Economics minor is designed to prepare non-business students with an overview of business knowledge, allowing students to combine other disciplines with necessary business skills. The functional areas of business are covered in the minor with additional upper division courses required based upon the chosen minor. The minor in economics is designed to prepare students with an overview of the basics of economics. Coursework includes the principle classes in macroeconomics and microeconomics, plus intermediate macroeconomics and microeconomics courses. The required coursework prepares students with the critical thinking and problem solving skills needed in today's world, as well as the ability to apply economic rationale in the decision making process.

The Business Department also offers the Bachelor of Business Administration with a concentration in economics.

Entrepreneurship
The minor in entrepreneurship is designed to equip students with the basic knowledge and skills needed to successfully operate a small business. The entrepreneurship minor is intended for students in disciplines other than business who wish to begin small businesses in their major area. The minor will provide students with the basics needed as they face the exciting challenges of small business ownership.

The Business Department also offers the Bachelor of Business Administration with a concentration in entrepreneurship.

CERTIFICATES

Business certificates are designed to provide entry-level knowledge, skills and abilities in a specific area. The coursework in each of the certificates can also be used as hours toward a two-year or four-year degree in that specialization. Emphasis in each certificate is on knowledge and skill development.

Entrepreneurship
The certificate in entrepreneurship is designed to expose students and prospective entrepreneurs to the beginning knowledge and skills needed to examine and evaluate entrepreneurship opportunities. The certificate will provide students with an overview of business knowledge, which more fully prepares them to operate their own businesses.

Supervision
The certificate in supervision is designed to expose students and business managers to the knowledge and skills needed to supervise employees in the workplace. Basic supervisory skills are addressed allowing students opportunities for successful promotions to managerial positions.

CONTACT INFORMATION
Department of Business, Dominguez Hall 309, 970.248.1778.

FACULTY

MORGAN BRIDGE (1995), Professor of Business; BBA, MA, Chadron State; PhD, University of Wyoming.

BRENDA COURTAD (2016), Assistant Professor of Business; BS, Ohio State University; MBA, University of Fidlay; PhD (ABD), University of Cincinnati.

BRIAN FRASER (2014), Assistant Professor of Finance; BBA, Colorado Mesa University; MS, University of Denver.

TIMOTHY HATTEN (1995), Professor of Business; BA, Western State College; MS, Central Missouri State; PhD, University of Missouri.

GEORGANN JOUFLAS (2005), Instructor of Business; BA, University of Colorado; MBA, George Washington University.

STEVE NORMAN (2016), Associate Professor of Business and Department Head of Business; BS, MBA, University of Colorado - Colorado Springs; PhD, University of Nebraska-Lincoln.

DEBORAH PARMAN (2005), Assistant Professor of Business; BA, Colorado State University; MAM, University of Redlands.

NATHAN PERRY (2010), Assistant Professor of Business; BA, Westminster College; PhD, University of Utah.

MATT ROSENBERG (2011), Assistant Professor of Business; CFA, CPA, MPA, The University of Texas at Austin.

Learn more about the programs of study listed here, and find program sheets detailing exact and complete requirements for majors and concentrations, online at ***coloradomesa.edu/academics****.*

PATRICK SCHUTZ (2004), Associate Professor of Business; BS, Eastern Michigan University; MS, University of Utah; PhD, Colorado State University.

KYLE STONE (2013), Assistant Professor of Business; BS, Central Missouri State University; MEd, PhD, Colorado State University

RICHARD VAIL (1997), Professor of Business; BS, University of California-Davis; MS, University of Colorado; PhD, Oxford University.

CHEMISTRY

PROGRAMS OFFERED
Bachelor of Science
Chemistry
Chemistry-Biochemistry
Minor
Chemistry

PROGRAM DESCRIPTION
Chemistry can be described as the systematic study of matter in the universe. It is often referred to as the "central science" in that it acts as the connection between many other disciplines including physics, biology, engineering, earth science, environmental science and medicine. Recent graduates have been successful in the chemical industry and in secondary education. Many have continued their education in graduate and professional schools.

Chemistry students gain a unique perspective on the composition, properties and reactivity of the substances surrounding them. These students gain problem-solving skills that can be applied in chemistry labs, in other classes and in day-to-day life. By having chemistry faculty with a diverse range of specialties (analytical chemistry, biochemistry, inorganic chemistry, physical chemistry and organic chemistry), chemistry majors have the opportunity to learn about each of these fields.

Opportunities for student research are numerous and the program is well equipped with modern chemical instrumentation, including a 300 MHz FT-NMR spectrometer, FT-IR and UV-Visible spectrophotometers, high performance liquid and ion chromatographs and an inductively-coupled plasma atomic emission spectrometer.

As the "central science," a strong background in chemistry is a wonderful complement to many other majors. A chemistry minor should be considered by any student who is interested in a career in science, medicine, patent law or technical sales.

CONTACT INFORMATION
Department of Physical and Environmental Sciences,
Wubben Science 232,
970.248.1993.

FACULTY

JAMES AYERS (2007), Associate Professor of Chemistry; BS, University of Texas-Austin; PhD, Stanford University.

TIMOTHY D'ANDREA (2009), Associate Professor of Chemistry; BS, Ursinus College; PhD, University of Colorado.

SUZANNE KENNEY (2006), Instructor of Chemistry; BS, MS, Clarkson University.

PHILIP KIEFER (2015), Instructor of Chemistry; BS, University of California-Davis; MS, PhD, University of California, San Diego.

SAMUEL LOHSE (2014), Assistant Professor of Chemistry; BS, MS, Idaho State University; PhD, University of Oregon.

JOSEPH RICHARDS (1995), Professor of Chemistry; BA, University of San Diego; PhD, University of North Carolina.

DAVID WEINBERG (2011), Assistant Professor of Chemistry; BA, University of San Diego; PhD, California Institute of Technology.

CIVIL ENGINEERING

PROGRAMS OFFERED
Bachelor of Science
Civil Engineering

PROGRAM DESCRIPTION
Colorado Mesa University and the University of Colorado Boulder partner to deliver a civil engineering program in its entirety in Grand Junction. Civil engineers design and supervise the construction of the buildings and infrastructure that make up our world - roads, bridges, tunnels, skyscrapers, transit systems, water treatment facilities, and offshore structures. They solve problems and meet challenges such as pollution, clean drinking water, climate change, energy and transportation needs, urban development, and community planning.

Students completing the program will be awarded a Bachelor of Science in Civil Engineering degree from CU Boulder.

Special Requirements
Students enter CMU as "pre-civil engineering" majors. They may apply to the Civil Engineering Partnership Program:

- After one year at CMU if they have completed a two course sequence in calculus and a two course sequence in physical science with As or Bs and have an overall technical GPA of 3.0 or better, or
- After completing all required lower-division coursework at CMU with a technical GPA of 3.0 or better.

Interested students can learn more about the program and admission options at coloradomesa.edu/engineering.

CONTACT INFORMATION
Brigitte Sundermann
WCCC Building A 122
970.255.2700.

DEPARTMENT HEAD ENGINEERING

BRIGITTE SUNDERMANN, (2001) Associate Technical Professor of Manufacturing Technology-CAD; BSCE, Colorado State University; M.B.A., University of Phoenix; PhD (ABD), Colorado State Univeristy

PROGRAM DIRECTOR

TIMOTHY BROWER (2009), Director, CMU/CU-Boulder Mechanical Engineering Partnership Program; BS, Idaho State University; MS, Montana State University; PhD, Colorado State University.

FACULTY

KELLY BEVILL (2011), Assistant Professor of Construction Management; BS, University of Colorado-Boulder; MS, Cornell University.

SCOTT BEVILL (2010), Associate Professor of Mechanical Engineering Technology; BS, University of Denver; MS, PhD, Stanford University.

B. SCOTT KESSLER (2011), Associate Professor of Mechanical Engineering Technology; BS, MS, PhD, University of Missouri.

SARAH LANCI (2015), Assistant Professor of Mechanical Engineering Technology; BS, Michigan State University; MS, Colorado School of Mines.

CHRIS PENICK (2016), Assistant Professor of Mechanical Engineering Technology; BS, Wright State University; MS, University of Dayton.

CLASSICAL STUDIES

PROGRAMS OFFERED
Minor
Classical Studies

PROGRAM DESCRIPTION
Classical studies provides the opportunity to explore the civilizations of ancient Greece and Rome and thus the roots of Western history, literature, and culture.

As an interdisciplinary field, classical studies encourages students to develop multiple intellectual skills and to think about the world around them from different perspectives. Current course offerings include Greco-Roman literature, mythology, history, archaeology, philosophy, political science, rhetoric, and of course, Latin and Greek. There is a significant amount of flexibility in the classical studies minor in terms of the courses one takes, but the study of ancient languages is the core of the program, and all minors must take one year of either Latin or Greek.

Classical studies is a great complement to other areas of study because a student can emphasize those aspects of classical civilization that relate to his or her primary field of study (e.g. literature, history, language, etc). In a more general sense, the skills and perspectives one acquires are well suited for those considering graduate school or any kind of post-graduate educational program such as law school or medical school. As a result of being interdisciplinary, the classical studies minor encourages students to employ a variety of methodologies in various disciplines while still developing a cohesive body of knowledge relevant to many fields and professions. The linguistic component ensures that one has a deeper understanding of language and can thus write, speak, and think more clearly. Furthermore, the fact that a great deal of specialized legal and medical terminology is based on Latin and Greek means that a minor in classical studies is great training for someone considering any kind of legal or medical profession.

CONTACT INFORMATION
Department of Languages, Literature and Mass Communication, Escalante Hall 237,
970.248.1687.
–or–
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

M. JASON REDDOCH (2011), Assistant Professor of English; BA, Millsaps College; PhD, University of Cincinnati.

DOUGLAS O'ROARK (1994), Professor of History; BA, MA, PhD, The Ohio State University.

COMPUTER INFORMATION SYSTEMS

PROGRAM DESCRIPTION
Bachelor of Applied Science
Computer Information Systems
Bachelor of Science
Computer Information Systems
Associate of Arts
Business Computer Information Systems Emphasis
Professional Certificate
Decision Support
Minor
Computer Information Systems
Managerial Informatics

PROGRAM DESCRIPTION
The Bachelor of Applied Science (BAS) in Computer Information Systems combines the technical skills and

business proficiency needed today. A unique program, the BAS allows students who have already earned an AAS to build upon their technical specialties with essential learning courses and junior/senior level computer information coursework. This allows associate degree holders to gain a 4-year degree in approximately four additional full-time semesters, depending upon prior coursework. Computer information systems courses include coursework in project management, systems analysis and design, database administration, networking, electronic commerce, productivity tools and decision support, as well as systems development and implementation, including programming and information systems theory. BAS students will be technically and academically prepared for management positions within information technology. Prospective students not holding an associate of applied science degree can begin their university career at CMU in a chosen field of study with a 2-year degree and then progress to a 4-year degree using the BAS.

The Bachelor of Science (BS) in Computer Information Systems is a degree required as organizations face the challenges of technology management. The program provides graduates with business management skills and computer information expertise to manage computer systems in today's organizations. As businesses increasingly rely on technology to provide a competitive advantage, employees with an understanding of both business concepts and computer systems are a necessity. Graduates of this program are employed in occupations such as systems analysts, analyst/programmers, database administrators, network administrators, web page designers, help desk specialists and information technology managers. Graduates assist businesses with creating, obtaining and maintaining computer information systems that solve problems and assist in facilitating routine business events. Computer information systems studies require students to examine computer systems from organizational, social, psychological and technical perspectives. Graduates from this program will have taken a variety of courses that were developed based on national guidelines for quality degrees in information systems.

The Associate of Arts (AA) degree provides students an overview of computer information systems and business. By earning essential learning credits, the degree also positions students for completion of a four-year degree in business. The degree program includes the Colorado Statewide General Education Core and meets the lower-division general education requirements at most public institutions in Colorado. The AA degree with an emphasis in business computer information systems, in addition to providing students with all of their essential learning, is useful in giving students a working knowledge of computer hardware and software. Common productivity tools such as presentation software, spreadsheets and database management software used in businesses are learned. If a student earns an associate's degree, the computer information systems AA provides skills that can be used in the workplace immediately.

The computer information systems minor allows students majoring in other areas to enhance their degrees with information systems knowledge. Such graduates may use their expertise to help solve computer system problems for businesses. Since many businesses rely heavily on computer systems as decision-making tools, graduates with this minor have a competitive advantage. Additionally, many employees in numerous organizations find themselves daily using computer hardware and software as productivity tools within their positions. The computer information systems minor assists students in learning skills and background information that they will need in all occupations.

The minor in managerial informatics is designed to prepare students for managerial level decision-making based on the use of information and computer technology. Today's world presents a wealth of information. Using information effectively requires insight and experience with a variety of tools. The managerial informatics minor is intended for students who are interested in expanding their knowledge and skills in the use of information and related technology. A managerial informatics minor coupled with any major can increase the employment opportunities available in a wide variety of areas.

The certificate in decision support systems is designed to expose students and business managers to the knowledge and skills needed to use computer software to solve business problems, particularly in the support of business decision making. This certificate addresses the need of today's managers to more fully manage the information systems functions of an organization. The certificate will provide students with an overview of information they would encounter if they went on to earn the minor in managerial informatics or the BBA concentration in information systems or the BS in computer information systems, each of which more fully prepares students to work in or manage the information systems functions of organizations.

The business department also offers the Bachelor of Business Administration with a concentration in information systems and managerial informatics.

CONTACT INFORMATION
Department of Business, Dominguez Hall 309, 970.248.1778.

FACULTY

JOHN DOBBS (2016), Instructor of Computer Science; BS, Ohio State University; MS, George Mason University.

DAVID PUMPHREY (2014), Assistant Professor of Computer Information Systems; BSBA, University of Arkansas; MS, Georgia State University; PhD, University of Mississippi.

JOHNNY SNYDER (2005), Professor of Computer Information Systems; BA, Fort Lewis College; MA, PhD, University of New Mexico; MS, Nova Southeastern University.

COMPUTER SCIENCE

PROGRAMS OFFERED

Bachelor of Science
Computer Science
Associate of Science
Computer Science Emphasis
Professional Certificate
Cyber Security (see entry under Cyber Security)
Minor
Computer Science

PROGRAM DESCRIPTION

Computer science is the study of algorithms and the issues involved in implementing them. The bachelor's degree in computer science includes core courses in algorithms, data structures, logic, programming languages, software design and advanced mathematics. Electives in web page design, artificial intelligence, robotics, computer graphics, video game design, databases, security, multimedia and networks are also possible. The program and course offerings are constantly evolving to keep up with the latest changes in the computer science field. The small class sizes at Colorado Mesa University allow for close interaction between faculty and students, with independent research projects and internships available.

A wide variety of professional and academic opportunities exist for graduates in the computer science field, including software engineering, software testing, computational finance, game design, computer graphics, robotics, artificial intelligence, internet systems and technology, security, hardware development, animation, medicine, biotechnology, business management and consulting and modeling, as well as master's and doctoral studies in computing-related fields. Graduates have continued on to advanced degrees in top tier schools and are employed at IBM, Microsoft, Sun, Lockheed-Martin and many other technical companies.

The Associate of Science with an emphasis in computer science includes courses in web page design, various programming languages, data structures and computer architecture. While the associate's degree prepares students to complete a Bachelor of Science in Computer Science (which is strongly recommended), employment opportunities are open to the successful graduate, including positions such as web developers, computer operators and technical support specialists.

A minor in computer science is an excellent enhancement to degrees in the many fields which make extensive use of computer software, such as engineering, physics and mathematics, but also for non-science fields such as graphic arts, education or sociology. The degree prepares students to understand computer science foundations in software development and in hardware, as well as common application software development such as database software, graphical user interfaces and video game design.

CONTACT INFORMATION

Department of Computer Science, Mathematics and Statistics, Wubben Science 132, 970.248.1407.

FACULTY

RAM BASNET (2013), Assistant Professor of Computer Science; BS, Colorado Mesa University; MS, PhD, New Mexico Institute of Mining & Technology.

KARL CASTLETON (2014), Assistant Professor of Computer Science; BS, Colorado Mesa University; MS, Washington State University.

WARREN MACEVOY (2001), Professor of Computer Science; BS, Colorado Mesa University; MS, PhD, University of Arizona.

LORI PAYNE (1996), Professor of Mathematics and Computer Science and Department Head of Computer Science, Mathematics and Statistics; BA, Colorado Mesa University; MS, New Mexico Institute of Mining & Technology; PhD, University of Northern Colorado.

GARY RADER (1995), Professor of Computer Science; BA, MA, PhD, University of Pennsylvania; MBA, University of Phoenix.

CONSTRUCTION ELECTRICAL

PROGRAMS OFFERED

Associate of Applied Science
Construction Electrical
Technical Certificate
Construction Electrical

The AAS degree in Construction Electrical is designed to prepare students for a wide range of opportunities in the construction electrical field. The curriculum incorporates courses in building materials, estimating, planning and scheduling, installations, codes, safety, tools, calculations, and print reading. Essential learning courses that develop supervisory skills. Career options include obtaining a position as an apprentice electrician, journeyman, electrician, electrical installer, or maintenance and repair electrician.

CONTACT INFORMATION

Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

CONSTRUCTION MANAGEMENT

PROGRAMS OFFERED

Bachelor of Science + Master of Business Administration (3+2)
Bachelor of Science
Construction Management

PROGRAM DESCRIPTION
Construction managers plan, direct and coordinate a wide variety of construction projects, including the building of all types of residential, commercial and industrial structures, and roads and bridges. Construction managers coordinate and supervise the construction process from the conceptual development stage through final construction, insuring the project is completed on time and within budget. They are salaried or self-employed managers who oversee construction supervisors and workers. They are also responsible for the safety of the work environment. Potential majors must be comfortable with mathematics, technical instruction, physical science, computers and software programs. They should work well under pressure and have good oral and written communication skills. This degree is intended to provide students with the needed knowledge, skills and abilities to be successful in this fast-paced challenging environment. Graduates of the construction management program will possess an OSHA 10-hour safety card upon graduation.

CONTACT INFORMATION
Department of Business, Dominguez Hall 309, 970.248.1778.

FACULTY

TROY MILLER (2013), Assistant Professor of Construction Management; BS, Brigham Young University; MS, Colorado State University.

CONSTRUCTION TECHNOLOGY

PROGRAM DESCRIPTION

Associate of Applied Science
Construction Technology – Craft (INACTIVE)
Construction Technology – Supervision
Technical Certificate
Construction Technology (INACTIVE)

PROGRAM DESCRIPTION
The AAS in Construction Technology with an emphasis in supervision is designed to prepare students for a wide range of opportunities in the construction field that require management skills. The curriculum incorporates courses in building materials and testing, estimating, planning and scheduling, project management and other supervisory and essential learning courses that develop management skills. Career options include obtaining a position as a purchasing manager, salesperson, crew supervisor, or project manager in the field of construction.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

FACULTY

GLEN HOFF (2013), Technical Instructor of Construction Technology; BA, California Polytechnic State University.

CRIMINAL JUSTICE

PROGRAM DESCRIPTION

Bachelor of Applied Science
Criminal Justice - POST Academy
Bachelor of Arts
Criminal Justice
Associate of Applied Science
Criminal Justice (WCCC)
Minor
Criminal Justice
Forensic Investigation

PROGRAM DESCRIPTION
The Associate of Applied Science (AAS) in Criminal Justice is designed for students who have completed or wish to complete the police academy program at Western Colorado Community College and incorporates instruction gained from the Peace Officer Standards and Training (POST) program. Students in the AAS program must complete the essential learning requirements and choose additional courses in law enforcement related studies either before or after completing the academy. Completion of the AAS in Criminal Justice may provide graduates with additional promotional opportunities in law enforcement areas (such as police and sheriff departments, state enforcement, parole officer, liquor enforcement and wildlife enforcement). Law enforcement agencies in some areas require an AAS degree for entry-level positions.

The Bachelor of Arts in Criminal Justice is designed to provide students interested in careers in the justice system with the knowledge, communication and critical thinking skills necessary for success in their field. The degree will also assist students in

their upward mobility in their area of employment. Graduates secure positions in law enforcement, probation, parole and corrections. Many also use this degree as the starting point in their pursuit of a law degree or Graduate School.

The Bachelor of Applied Science in Criminal Justice combines the POST requirements of the AAS degree with the academic rigor of the baccalaureate degree.

The criminal justice minor is designed to provide students interested in the justice system with the knowledge, communication and critical thinking skills necessary for success in their field.

SPECIAL REQUIREMENTS
The Associate of Applied Science (AAS) degree is based on completing the Peace Officer Standards and Training (POST) program at WCCC. (See the POST entry elsewhere in this section). Students who have completed the POST program must complete the essential learning requirements and five additional specified courses to earn an AAS.

CONTACT INFORMATION
Associate Degree: Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

PROGRAM DIRECTOR
JANE QUIMBY (2012), Director of Public Safety; BS, University of Utah; JD, University of Denver.

Baccalaureate Degree: Department of Social and Behavioral Sciences, Lowell Heiny Hall 413,
970.248.1696.

FACULTY

MICHAEL DELANEY (2008), Associate Professor of Criminal Justice; BA, Transylvania University; JD, Salmon P. Chase College of Law; PhD, University of Cincinnati.

KATIE DREILING (2011), Associate Professor of Criminal Justice; BA, MS, St. Cloud State University; PhD, South Dakota State University.

JOHN REECE (2006), Associate Professor of Criminal Justice; BA, Mesa State College; MPA, University of Colorado-Denver; PhD, Northcentral University.

CULINARY ARTS

PROGRAM DESCRIPTION
Associate of Applied Science
Culinary Arts
Technical Certificate
Food Preparation

Program Description
The culinary arts program trains people interested in developing professional food preparation and management skills. From future chefs to foodies, develop your basic cooking and baking techniques, or take your career to the next level at the WCCC Culinary Arts Center in Grand Junction, Colorado. Small class sizes translate to personal attention given students by our highly skilled and respected culinary instructors. Interaction between students and local diners at Chez Lena restaurant complements marketing, dining room management, and advanced cooking coursework. Whether you want to start seriously playing with food or start your own business, discover your passion at Western Colorado Community College/Colorado Mesa University.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

FACULTY

DAN KIRBY, CHE (1999), Assistant Technical Professor and Program Coordinator of Culinary Arts; Certified Hospitality Educator; AAS, Colorado Mesa University

WAYNE SMITH CEC, CCE (1998), Assistant Technical Professor of Culinary Arts; Certified Executive Chef; AAS, Mesa State College.

JONATHAN ST. PETER, CEC, CCE (2004), Assistant Technical Professor of Culinary Arts; Certified Chef Educator; AAS, Colorado Mountain College.

CULTURAL RESOURCE MANAGEMENT

PROGRAM DESCRIPTION
Professional Certificate
Cultural Resource Management

PROGRAM DESCRIPTION
The certificate in cultural resource management is designed to give students all of the basic skills necessary for entry-level (field technician) positions in applied archaeology. These will include, but are not limited to, basic archaeological field methods, basic archaeological lab methods, the use of Geographic Information Systems and Public Interpretation. Beyond these skills, however, the certificate program strives to produce creative, engaged and informed archaeologists who can articulate Cultural Resource Management's role in inquiry-based archaeology and its larger anthropological goals.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

JOHN SEEBACH (2014), Assistant Professor of Archaeology; BA, University of Texas at El Paso; MA, PhD, Southern Methodist University.

CYBER SECURITY

PROGRAM DESCRIPTION
Professional Certificate
Cyber Security

PROGRAM DESCRIPTION
The professional certificate in cyber security includes courses and topics from basic computer and system security to more advanced topics in network and application security areas of information assurance.

A certificate in cyber security is an excellent enhancement to computer science and related fields. The program is designed to provide students interested in careers in cybersecurity areas with the knowledge and skills necessary for success in this very important and demanding field of information assurance.

CONTACT INFORMATION
Department of Computer Science, Mathematics and Statistics, Wubben Science 132,
970.248.1407.

FACULTY

RAM BASNET (2013), Assistant Professor of Computer Science; BS, Colorado Mesa University; MS, PhD, New Mexico Institute of Mining and Technology.

DANCE

PROGRAM DESCRIPTION
Bachelor of Fine Arts
Dance
Minors
Dance

PROGRAM DESCRIPTION
The dance program is constructed to help students meet the rigorous demands of a professional career in dance and to provide a strong artistic foundation and practical experience. Beginning with the first semester, students enroll in courses taught by academically and professionally experienced faculty.

The dance concentration offers an array of dance styles and performance opportunities. Modern, jazz, hip-hop, ballroom, ballet and tap are offered from beginning to professional levels. Other courses include composition, improvisation, pedagogy, history, music analysis, dancer health and repertory performance.

The dance program produces two faculty directed dance concerts and two student directed dance concerts yearly. In addition, professional guest choreographers and teachers are hired every semester from across the country to teach master classes and set choreography on students for the faculty concerts.

SPECIAL REQUIREMENTS
Students seeking admission as dance majors must successfully audition for acceptance into the program. Admission to the University does not guarantee admission into one of these programs. Prospective theatre majors should consult the department's website or contact the department directly for information regarding audition dates and requirements. Prospective students interested in departmental scholarships must audition no later than April 15 of the year they seek admission.

CONTACT INFORMATION
Department of Theatre Arts, Moss Performing Arts Center 141,
970.248.1233.

FACULTY
MEREDITH LYONS (2016), Assistant Professor of Dance; BA, Mercyhurst University; MFA, Smith College.

DECISION SUPPORT

(SEE COMPUTER INFORMATION SYSTEMS)

Learn more about the programs of study listed here, and find program sheets detailing exact and complete requirements for majors and concentrations, online at ***coloradomesa.edu/academics****.*

ECONOMICS

(SEE BUSINESS)

EDUCATION: EARLY CHILDHOOD

PROGRAM DESCRIPTION

Bachelor of Arts
- **Early Childhood Special Education**

Associate of Arts
- Early Childhood Education Emphasis

Technical Certificate
- Early Childhood Education Director
- Early Childhood Education Entry-Level Teacher
- Early Childhood Education Teacher

PROGRAM DESCRIPTION

The Early Childhood Special Education program provides teacher education candidates with a broad content knowledge and prepares them as teachers for early childhood including preschool through second/third grade (birth to age 8) in an inclusive setting. As a student, you will gradually accumulate over 200 hours of classroom experience before beginning student teaching. School districts throughout western Colorado provide opportunities to gain experience with children of all ages and backgrounds in a variety of school settings. A minimum of 60 credit hours of essential learning and foundation coursework must be completed with a minimum GPA of 2.80 before a candidate may apply for admission to the Center for Teacher Education program. Please see the Teacher Education Admission Packet for further information on admissions criteria.

The early childhood certificate program prepares students for careers in licensed early childhood care and education programs and enables students to meet the educational qualifications of the Colorado Department of Human Services. Students who wish to work in licensed early childhood classrooms may complete the director or teacher sequence and then continue on to earn an Associate of Arts in Early Childhood Education. Career options include opportunities in childcare centers and preschools.

The Associate of Arts (AA) with an early childhood education emphasis provides students with a foundation for working with children from birth to age eight in a variety of settings. Our faculty offer one-on-one guidance for course selection, field placements, student teaching and employment.
With an increasing focus on quality early education, many organizations are requiring their employees to demonstrate a level of expertise provided by the AA degree. Our students complete their degree with a culminating student teaching experience giving them an opportunity to teach in a preschool classroom for a semester. Graduates of the early childhood program are employed in large and small child care centers, operate their own home care centers, work in other school settings, or use coursework as a foundation to continue into elementary education. In addition, the program aligns with state requirements for early childhood teacher certification and large center director qualification.

SPECIAL REQUIREMENTS

Study directed toward the Associate of Arts degree may serve as a basis for the Bachelor of Arts degree with elementary education licensure. Programs of study are sequential and advanced planning is necessary for an efficient transition from an associate program to a baccalaureate program. Faculty advisors assist students in planning programs to meet requirements. Students seeking childcare center director qualification should meet with an advisor in order to meet specific certification requirements.

CONTACT INFORMATION

Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

EDUCATION: TEACHER LICENSURE

PROGRAM DESCRIPTION

Coursework Leading to Initial Licensure (Elementary; Secondary; K-12; Early Childhood)

Master of Arts, Education
- Applied Mathematics
- Educational Leadership
- English for Speakers of Other Languages
- Exceptional Learner
- Initial Teacher Licensure (Elementary; Secondary)
- Rhetoric and Literary Studies
- Social Sciences
- Teacher Leader

Graduate Certificate
- Applied Mathematics
- Educational Leadership
- English for Speakers of Other Languages
- Exceptional Learner
- Initial Teacher Licensure (Elementary; Secondary)
- Rhetoric and Literary Studies
- Social Sciences
- Teacher Leader

Program Description

The Center for Teacher Education offers licensure programs in elementary, secondary and K-12 education. Licensure to teach in public schools in the state of Colorado requires each teacher candidate complete coursework in a content area and a sequence of professional education courses that include extensive field experience and classroom placements. For undergraduate students, teacher licensure coursework and field experiences are completed through the Center for Teacher Education, while the content degree coursework is completed in the academic department of the discipline area. Both departments coordinate to assist teacher candidates in completing the program. Formal admission to the Center for Teacher Education is required of all students planning to obtain a Colorado Educator License. Admission to Colorado Mesa University does not guarantee admission to the Teacher Education program, which requires a separate application process. Contact the Center for Teacher Education for information; also see the section in this catalog on the Center for Teacher Education.

In order to complete all licensure requirements in a timely manner, it is important that students contact the center as soon as possible after enrolling at Colorado Mesa University. Interested students should enroll in EDUC 115 and EDUC 215 before applying for formal admission to the Center for Teacher Education.

Please see Graduate Programs for post-graduate options for teacher licensure.

CONTACT INFORMATION
Center for Teacher Education, Dominguez Hall, Suite 109, 970.248.1786.

FACULTY

NANCY ALEX (2015), Assistant Professor of Teacher Education; BA, University of Wyoming; MA, Adams State; PhD, University of Denver.

BLAKE BICKHAM (2007), Associate Professor of Teacher Education and Department Head of Teacher Education; BA, MA, Texas A&M University; EdD, University of Houston.

CYNTHIA CHOVICH (2007), Associate Professor of Teacher Education; BA, California State University–San Marcos; MA, Grand Canyon University; EdD, Walden University.

LISA FRIEL (1998), Professor of Teacher Education; BA, University of California-Santa Barbara; MEd, EdD, Northern Arizona University.

ANN GILLIES (2014), Assistant Professor of Teacher Education; BS, MA, The Ohio State University; PhD, University of South Florida.

DENISE HOCTOR (2016), Instructor of Teacher Education; BS, Eastern Michigan University; MA, Western State College.

ELECTRIC LINEWORKER

PROGRAM DESCRIPTION
Associate of Applied Science
Electric Lineworker
Technical Certificate
Electric Lineworker

PROGRAM DESCRIPTION
This program covers all areas of training required to work with electric lines, including: basic skills and studies of electricity, math, fundamentals of line work, transformer connections and underground installation. In addition to training at the field location, all students are encouraged to obtain Red Cross First Aid and CPR cards as a requirement for employment. With this certificate, students will be prepared for entry-level positions as electric line mechanics, electric lineworkers or power lineworkers.

SPECIAL REQUIREMENTS
Climbing and working on poles and towers is required. Students receive field training and practical theory in all phases of powerline installation and maintenance. An outdoor laboratory covers climbing, setting and removing various sizes of poles, guy work, conductors, transformers, street

lights, installation of services and the use and care of safety equipment. Prospective students are encouraged to contact the College about physical requirements. This program begins only in the fall semester of each year.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

EMERGENCY MANAGEMENT AND DISASTER PLANNING

PROGRAM DESCRIPTION
Professional Certificate
Emergency Management and Disaster Planning

PROGRAM DESCRIPTION
An Emergency Management and Disaster Planning certificate is an addition for students from a variety of majors interested in engaging in emergency and disaster related services in the public, non-profit and private sectors. The certificate provides the knowledge and skills necessary for students to engage in activities related to responding to, recovering from, preparing for and mitigating against disasters. The certificate also prepares students for completing the national certification program in emergency management.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696

FACULTY

ELIOT JENNINGS (2013), Assistant Professor of Public Administration; BS, MPA, PhD, University of Texas.

EMERGENCY MEDICAL SERVICES

PROGRAM DESCRIPTION
Associate of Applied Science
Emergency Medical Technician - Paramedic
Technical Certificate
Emergency Medical Technician - Basic
Emergency Medical Technician - Paramedic

Program Description
The Emergency Medical Technician (EMT) – Basic represents the first component of the emergency medical technician system. An EMT – Basic is trained to care for patients in their home or at the scene of an accident and while transporting patients by ambulance to the hospital under medical direction. The EMT – Basic has the emergency skills to assess a patient's condition and manage respiratory, cardiac, and trauma emergencies. EMT coursework typically emphasizes emergency skills, such as patient assessment, managing respiratory, trauma, and cardiac emergencies. Formal courses are combined with skills practice and time in an emergency room and on an ambulance for a total of 195 contact hours. The program also provides instruction and practice in dealing with bleeding, fractures, airway obstruction, cardiac arrest, and emergency childbirth. Students learn how to use and maintain common emergency equipment, such as backboards, suction devices, splints, oxygen delivery systems, and stretchers. The program prepares the graduate to take the NREMT examination and become certified as an EMT. Career options include opportunities in hospital emergency rooms, fire departments, doctor offices, private ambulance services, and search and rescue.

The EMT-Paramedic represents the most advanced level of training of the emergency medical technician system. At this level, the caregiver receives advanced training in the use of procedures, medications and equipment to manage medical emergencies and traumatic injuries in patients of all ages. EMT-Paramedics (EMT-4) provide the most extensive pre-hospital care. Through performance of assessments and providing medical care, their goal is to prevent and reduce mortality and morbidity due to illness and injury. Paramedics primarily provide care to emergency patients in an out-of-hospital setting. The program prepares the graduate to take the NREMT examination and become certified as an EMT-Paramedic. Extensive related coursework and clinical and field experience is required. Students admitted to the program must have and maintain EMT certification throughout the EMT-Paramedic program. Admission to the Paramedic program is competitive. Admission into Colorado Mesa University does not guarantee acceptance into the Paramedic program, which requires a separate application process. Paramedics should be emotionally stable, have good dexterity, agility, and physical coordination, and be able to lift and carry heavy loads. EMT-Paramedics are employed by fire, police and rescue agencies, hospitals, private ambulance companies, flight for life, and in a variety of businesses and industries with a high potential for accidental injury or illness. Graduates from this course, whether the certificate program or the AAS degree program will graduate as street-ready paramedics.

SPECIAL REQUIREMENTS
Students must earn a "C" or higher for all courses required for completion of the EMS programs. This policy applies regardless of when the course was taken.

Students must possess a current AHA-CPR card while in all EMS courses.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

FACULTY
PAM HOLDER (2014), Technical Instructor of Emergency Medical Services; BS, FTO, Colorado Christian University.

ENERGY MANAGEMENT/ LANDMAN

PROGRAM DESCRIPTION
Bachelor of Business Administration
Energy Management/Landman
Professional Certificate
Energy Management/Landman

PROGRAM DESCRIPTION
The certificate in energy management/landman is designed to provide students with the knowledge and skills needed to engage in landman activities in the energy sector. The certificate will provide students with a foundation for further study in the energy management/landman concentration in the BBA, which more fully prepares a person for a successful career in the growing energy industry.

CONTACT INFORMATION
Department of Business, Dominguez Hall 309, 970.248.1778.

FACULTY
STEVE SOYCHAK (2015), Instructor of Energy Management Landman; BS, University of Oklahoma.

ENGINEERING

SEE MECHANICAL ENGINEERING

ENGLISH

PROGRAM DESCRIPTION
Bachelor of Arts
English – Literature
English – Writing
English – Secondary Education
Minors
English

PROGRAM DESCRIPTION
The English program at Colorado Mesa University offers a Bachelor of Arts in literature, writing, and secondary education. The skills a student develops as an English major,

such as writing, editing, problem solving, critical thinking, and analysis, are highly prized by employers in nearly every profession.

The Center for Teacher Education offers a comprehensive program of study that leads to licensure in Colorado. The secondary licensure program provides teacher education candidates with broad content knowledge in English and prepares them as teachers for grades 7 through 12. Please see the Teacher Education Admission Packet for further information on admissions criteria.

The English minor should be of interest to students who want to broaden their backgrounds in the liberal arts as well as to those planning careers in which experience in literature and writing is useful, such as law, journalism, advertising, theatre, business, public service, or graduate study in other academic subjects.

CONTACT INFORMATION
Department of Languages, Literature and Mass Communication, Escalante Hall 237, 970.248.1687.

FACULTY

JULIE BARAK (1997), Professor of English; BA, MA, Creighton University; PhD, University of Nebraska.

KATE BELKNAP (2011), Instructor of English; BA, The University of the South; MA, University of Dallas.

JULIE BRUCH (2002), Professor of English; BA, Western Michigan University; MA, PhD, University of Kansas, Lawrence.

BONNIE BUTLER (2011), Instructor of English; BA, Fort Lewis College; MA, Colorado State University.

ROBIN CALLAND (2009), Associate Professor of English; BA, University of Colorado, Denver; MA, PhD, University of Colorado Boulder.

COLIN CARMAN (2013), Instructor of English; BA, Hamilton College; MA, University of California, Santa Barbara; PhD University of California, Santa Barbara.

CAROL CHRIST (2004), Instructor of English; BA, Mesa State College; MFA, Colorado State University.

RHONDA CLARIDGE (2004), Instructor of English; BA, New York University; MA, University of Colorado.

BARBARA GEIGER (2000), Instructor of English; BA, MA, PhD, Texas Tech University.

T J GERLACH (2005), Associate Professor of English; BA, MFA, University of Utah; PhD, University of Denver.

KURTIS HAAS (1999), Professor of English and Assistant Vice President for Academic Affairs; BA, MA, Truman State University; PhD, University of Nebraska.

KRISTEN HAGUE (2001), Professor of English; BA, Providence College; MA, PhD, University of New Mexico.

JENNIFER HANCOCK (2010), Associate Professor of English; BA, Oklahoma State University; MFA, Sarah Lawrence College; PhD, Oklahoma State University.

MICHELE HANSON (2005), Instructor of English and French; BA, University of California, Santa Barbara; MA, University of New Hampshire; MLS, University of Arizona.

LABECCA JONES (2013), Instructor of English; BA, Colorado Mesa University; MA, Oklahoma State University.

JEREMY JURGENS (2013), Instructor of English; BS, Utah Valley University; MA, Oregon State University.

BARRY LAGA (1997), Professor of English and Department Head of Languages, Literature and Mass Communication; BA, MA, Brigham Young University; PhD, Purdue University.

ALLISON MORRIS (2011), Instructor of English; BA, MA, Texas A&M University.

JOHN NIZALOWSKI (1990), Instructor of English; BA, Binghamton University; MA, University of Delaware.

RANDY PHILLIS (1993), Professor of English; BA, MFA, Wichita State University; PhD, Oklahoma State University.

M. JASON REDDOCH (2011), Associate Professor of English; BA, Millsaps College; PhD, University of Cincinnati.

WILLIAM WRIGHT (1998), Professor of English; BA, Linfield College; MA, University of New Hampshire; PhD, University of Arizona.

ENTREPRENEURSHIP

(SEE BUSINESS)

ENVIRONMENTAL SCIENCE AND TECHNOLOGY

PROGRAM DESCRIPTION
Bachelor of Science
Environmental Science and Technology
Pollution Monitoring and Control (option)
Ecosystem Restoration (option)
Professional Certificate
Sustainability Practices
Minor
Environmental Science and Technology

Program Description
The goal of the environmental science and technology program is to educate students in the science, protection and restoration of our natural resources—air, water, land and ecosystems. Students develop a solid foundation in biology, chemistry, mathematics, statistics and communication skills, then apply this knowledge to the study and solution of environmental problems. Theory is balanced with hands-on practice, which includes considerable work outdoors in the local environment. Individual and group projects are a key component of courses and students participate in work performed through partnerships with agencies such as the Colorado National Monument and the Colorado Division of Reclamation, Mining and Safety. Students must choose either the pollution monitoring and control option, which focuses on pollution prevention as well as investigation and cleanup, or the ecosystem restoration option, which focuses on strategies for managing natural resources.

The environmental science and technology minor is an invaluable asset to students who are majoring in biology, chemistry or geology and planning to work in an environmental profession.

Through the certificate in sustainability practices, students learn the principles of sustainability along with specific ways to implement them. Anyone seeking to understand and practice this approach will benefit from completion of the program. For some, the program can serve as a first step toward a more in-depth knowledge that may lead to a career. This certificate could help professionals to distinguish their business practices, community leaders to understand future trends in community planning, and any student, educator, or citizen to make a positive difference in the environment.

CONTACT INFORMATION
Department of Physical and Environmental Sciences,
Wubben Science 232,
970.248.1993.

FACULTY

DEBORAH KENNARD (2005), Professor of Environmental Science and Technology; BA, Trinity University; MA, PhD, University of Florida.

TAMERA MINNICK (2002), Professor of Environmental Science and Technology; BS, University of Nebraska; PhD, Colorado State University.

RUSSELL WALKER (1993), Professor of Environmental Science and Technology and Department Head of Physical and Environmental Sciences; AB, Oberlin College; PhD, Iowa State University.

EXERCISE SCIENCE

PROGRAM DESCRIPTION
Bachelor of Science
Exercise Science
Minor
Exercise Science

Program Description
Students enrolled in this major should have a strong interest in the sciences as this program applies science to human function. The student will begin studies with science courses such as physics, general chemistry and human anatomy and physiology. Continued studies will include courses such as: exercise physiology, anatomical kinesiology, biomechanics, physical activity and aging, medical conditions and pharmacology and sports nutrition, among other subject areas. This major is designed to prepare students for graduate programs such as: physical therapy, physician's assistant, occupational therapy and exercise physiology. Exercise Science students frequently continue their study for graduate or professional degrees at universities widely recognized as top programs in exercise physiology, physical therapy, occupational therapy, physical education and public health.

CONTACT INFORMATION
Department of Kinesiology, Maverick Center 237B,
970.248.1635.

FACULTY

JILL CORDOVA (1992), Professor of Kinesiology; BA, MA, Humboldt State University; PhD, University of New Mexico.

CARMINE GRIECO (2015), Assistant Professor of Kinesiology; BS, University of Wyoming; MS, PhD, Old Dominion University.

KEITH FRITZ (1997), Professor of Kinesiology; BS, Oregon State University; MS, PhD, University of New Mexico.

JEREMY HAWKINS (2013), Associate Professor of Kinesiology and Department Head of Kinesiology; BS, Brigham Young University; MS, Oregon State University; PhD, Brigham Young University.

KRISTIN HEUMANN (2011), Associate Professor of Kinesiology; BA, Northwestern College; MS, PhD, Arizona State University.

ERIN LALLY (2016), Instructor of Kinesiology; BS, MS, Illinois State University.

STEVEN ROSS MURRAY (1998), Professor of Kinesiology; BS, University of North Alabama; MS, DA, Middle Tennessee State University.

MICHAEL REEDER (2015), Acting Director Monfort Family Human Performance Laboratory; BS, Youngstown State University; DO, Ohio University Heritage College of Osteopathic Medicine.

ELIZABETH SHARP (2011), Associate Professor of Kinesiology; BS, MEd, Arkansas Tech University; PhD, Middle Tennessee State University.

FINANCE

(SEE BUSINESS)

FORENSIC ANTHROPOLOGY

PROGRAM DESCRIPTION
Minor
Forensic Anthropology

PROGRAM DESCRIPTION
Forensic anthropology is the use of anthropological techniques to assist law enforcement, with the focus on the study of the human skeleton. Generally, physical anthropologists concentrate on the recovery and identification of human remains, most often where the victim's remains are in advanced stages of decomposition. There are two main foci—osteology (the study of bones) and taphonomy (the study of how organic matter decays). An osteological analysis of a skeleton assesses the age, sex, ancestry, stature, and unique features of an individual from the skeleton. The study of taphonomy helps to determine a post-mortem interval and what happened to a body from the time of death to the time of discovery. The minor is suited to those majoring in criminal justice or biology with an interest in death investigation.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696

FACULTY

MELISSA CONNOR (2011), Associate Professor of Forensic Anthropology, Director of the Forensic Investigation Research Station; BA, MA, University of Wisconsin; PhD, University of Nebraska, Lincoln.

FORENSIC INVESTIGATION - CRIMINAL JUSTICE

(SEE CRIMINAL JUSTICE)

FORENSIC INVESTIGATION - PSYCHOLOGY

(SEE PSYCHOLOGY)

FORENSIC SCIENCE

PROGRAM DESCRIPTION

Minor

Forensic Science

PROGRAM DESCRIPTION

Forensic science is a growing professional field throughout the United States. Forensic science is the interface between analytical science and the law. Students with a minor in forensic science can seek employment with CBI and other employers conducting forensic investigations, or they may continue their education by seeking a master's degree in forensic science at another institution. The minor is best suited for students majoring in biology or chemistry. The minor will enhance students' skills in the molecular biology, analytical chemistry and criminalistic techniques used in forensic investigations.

CONTACT INFORMATION

Department of Biological Sciences, Wubben Science 232, 970.248.1993.

GEOGRAPHIC INFORMATION SCIENCE AND TECHNOLOGY

PROGRAM DESCRIPTION

Professional Certificate

Geographic Information Science and Technology

Minor

Geographic Information Science and Technology

PROGRAM DESCRIPTION

Colorado Mesa University offers a certificate and a minor in geographic information science and technology. The courses are open to all students interested in broadening their knowledge and enhancing job-related skills in a rapidly expanding market of computer-based technology. The multidisciplinary nature of geographic information science and technology allows students from a wide variety of fields to participate in this exciting program.

There is a strong demand for people who are trained in geographic information science and technology and this certificate assists students in securing jobs in this rapidly growing field. GIS/GPS can be used for cartography, business, biology, geology, environmental science, history, archeology and criminal justice.

CONTACT INFORMATION

Department of Physical and Environmental Sciences, Wubben Science 232, 970.248.1993.

GEOSCIENCES

PROGRAM DESCRIPTION

Bachelor of Science

Geosciences – Environmental Geology
Geosciences – Geology
Geosciences – Secondary Education

Associate of Science

Geology Emphasis

Minors

Geology
Watershed Science

Program Description

Geology

The geology concentration is designed for students who (1) desire a strong liberal arts education with emphasis on the earth sciences, (2) wish to pursue a graduate degree in geology, or (3) desire a professional or technical geoscience career. Recent graduates are attending graduate programs at major universities or have entered the work force as geological technicians or professional geologists.

Instruction takes place in a state-of-the art science complex, which houses several instructional laboratories, a projects room, a computer applications laboratory, a petrology-

mineralogy laboratory, rock-storage facilities and a sample preparation room.

Most classes have a strong field component so that students experience the diverse geological setting of the Grand Junction area. Equipment available includes a computer-assisted X-ray diffractometer, research petrographic microscopes, binocular microscopes, scanning-electron microscopes (available through the biology department), GPS units, short-period and long-period seismometers and a magnetometer. Computer facilities include modern PC systems with software basics for communications, database management, word-processing, geographic information systems (GIS) and geostatistics.

Environmental Geology
The environmental geology concentration is designed for students who (1) desire a strong liberal arts education with emphasis on environmental issues within the earth sciences, (2) wish to pursue a graduate degree in environmental geology, or (3) desire a professional or technical career. The environmental geology concentration has the same basic framework as the geology concentration, but has a stronger emphasis on geologic hazards, ground-water and surface-water hydrology, low-temperature geochemistry, biological systems and environmental science. Recent graduates are attending graduate programs at major universities or have entered the work force as geological technicians or professional geologists.

Most classes have a strong field component so that students experience the diverse geological setting of the Grand Junction area. Equipment available includes a computer-assisted X-ray diffractometer, research petrographic microscopes, binocular microscopes, scanning-electron microscopes (available through the biology department), GPS units, short-period and long-period seismometers and a magnetometer. Computer facilities include modern PC systems with software basics for communications, database management, word-processing, geographic information systems (GIS) and geostatistics.

Geology–Secondary Education
The geology secondary education licensure concentration is structured for graduates to pursue teaching careers at the middle or high school level. The basic curriculum includes all of the major topics within a traditional geology program while also incorporating teacher education courses required for licensure by the state of Colorado.

A minimum of 75 credit hours of essential learning and content area coursework must be completed with a minimum GPA of 2.80 before a candidate may apply to the Center for Teacher Education secondary licensure program. Please contact the Center for Teacher Education for further information on admissions criteria.

The geology minor is designed for students who wish to take additional basic geology courses in support of their degree aspirations in other areas. A total of 21 geology credit hours are required. Most classes have a strong field component so that students can enjoy the diverse geological setting of the Grand Junction area.

Watershed Science
The watershed science minor is an interdisciplinary program designed to serve the regional need for scientists with a strong background in water-related issues. It is a useful complement to environmental, physical and biological science majors, providing students in these fields with certification of focused coursework. Combined with the relevant BS, plus additional calculus and physics courses, the minor satisfies the federal government's requirements for qualification as a hydrologist. The proximity of Colorado Mesa University to the Colorado, Gunnison and Green Rivers, the drainages of the Colorado National Monument and the high arroyos create an ideal location for the study of watershed science.

CONTACT INFORMATION
Department of Physical and Environmental Sciences,
Wubben Science 232,
970.248.1993.

FACULTY

ANDRES ASLAN (1999), Professor of Geology; BS, Brown University; MS, PhD, University of Colorado.

REX COLE (1995), Professor of Geology; BS, Colorado State University; PhD, University of Utah.

JONATHAN COOLEY (2012), Instructor of Geology; BA, University of Colorado; MS, Montana State University

CASSANDRA FENTON (2016), Instructor of Geology; BS, University of Rochester; MS, PhD, University of Utah.

VERNER JOHNSON (1989), Professor of Geology; BA, MS, Southern Illinois University; PhD, University of Tennessee.

LAWRENCE JONES (2013), Instructor of Geology; BS, Fort Lewis College; MS, Northern Arizona University; PhD, University of Wyoming

RICHARD LIVACCARI (1997), Professor of Geology; BS, University of New Mexico; MS, State University of New York-Albany; PhD, University of New Mexico.

GIGI RICHARD (2002), Professor of Geology; BS, Massachusetts Institute of Technology; MS, PhD, Colorado State University.

GRAPHIC DESIGN

PROGRAM DESCRIPTION
Bachelor of Fine Arts
Graphic Design – Visual Design
Minors
Graphic Design

Program Description
The Bachelor of Fine Arts degree with a Graphic Design: Visual Design major focuses on design as a professional craft and as a vehicle for communication and connecting with society. Students learn to see design as a visual language and force for cultural change within our world by giving them the tools to enhance the visual experience of the public. Course work includes color theory, drawing, traditional illustration, digital illustration, composition, typography and best practices for designers to meet the needs of the profession. The successful degree candidate is prepared to enter professions within

graphic design including advertising, marketing, packaging design, identity design, illustration, digital design and a myriad of related fields.

The graphic design minor acquaints students with some of the core elements related to the study and profession of graphic design. Courses will consist of both academic lecture and practical studio. This minor provides students an opportunity to integrate personal creativity with any specified major degree. A background in graphic design can promote a variety of professional opportunities including areas of applied design, public relations, business graphics, product design, marketing and advertising.

For a program sheet that describes the requirements, see a faculty advisor or go to coloradomesa.edu/academics.

CONTACT INFORMATION
Department of Art and Design, Fine Arts 200,
970.248.1833.

FACULTY

SUZIE GARNER (1995), Professor of Art and Department Head of Art; BFA, MA, Stephen F. Austin State University; MFA, West Texas A&M.

ELI MARCO HALL (2012), Assistant Professor of Art-Graphic Design; BFA, Missouri State University; MFA, Colorado State University; MA, Lindenwood University.

HEALTH INFORMATION TECHNOLOGY SYSTEMS

PROGRAM DESCRIPTION
Graduate Certificate
Health Information Technology Systems
Professional Certificate
Health Information Technology Systems

Program Description
This multi-disciplinary certificate prepares students in foundations/introduction to healthcare informatics, database management systems, and information systems security and privacy. Offered at the undergraduate and graduate level, the certificate combines coursework in business, health sciences, and nursing.

CONTACT INFORMATION
Department of Business, Dominguez Hall 309,
970.248.1778.
-or-
Department of Health Sciences, Maverick Center 167,
970.248.1398.

HISTORY

PROGRAM DESCRIPTION
Bachelor of Arts
History
History – Secondary Education
Minor
History
Public History

Program Description
The study of history prepares the student for understanding present society and culture through a study of the past. The history program familiarizes students with the great historical civilizations and issues that have shaped our present world. History teaches students how to critically analyze information and make a compelling argument; skills that everyone needs to be successful in all their endeavors. Internships are available through museums, historical societies and public agencies. History graduates pursue careers in teaching and public history, as well as private employment and have also been very successful in gaining entrance to graduate study and law school.

The Center for Teacher Education offers a comprehensive program of study that leads to licensure in Colorado. Faculty offer one-on-one guidance for course selection, field placements, student teaching and employment. Students accumulate over 200 hours of classroom experience before beginning student teaching. School districts throughout western Colorado provide opportunities to gain experience with children of all ages and backgrounds in a variety of school settings.

The secondary licensure program provides teacher education candidates with broad content knowledge in history and prepares them as teachers for grades 7 through 12. A minimum of 75 credit hours of essential learning and content area coursework must be completed with a minimum GPA of 2.80 before a candidate may apply for admission to the Center for Teacher Education secondary licensure program. Please see the Teacher Education Admission Packet for further information on admissions criteria. EDUC 115 and 215 must be taken before applying to the program.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

ERIKA JACKSON (2010), Associate Professor of History; BA, Michigan State University; MA, Loyola University; PhD, Michigan State University.

JUSTIN LILES (2011), Instructor of History; BA, MA, University of North Texas; PhD, University of South Carolina.

DOUGLAS O'ROARK (1994), Professor of History; BA, MA, PhD, The Ohio State University.

VINCENT PATARINO, JR. (2011), Associate Professor of History; BA, BS, MA, PhD, University of Colorado-Boulder.

ADAM ROSENBAUM (2011), Associate Professor of History; BA, Virginia Wesleyan College; MA, Old Dominion University; PhD, Emory University.

STEVEN SCHULTE (1989), Professor of History; BA University of Wisconsin-River Falls; MA, Colorado State University; PhD, University of Wyoming.

SARAH SWEDBERG (1999), Professor of History; BA, State University of New York - Plattsburgh; MA, PhD, Northeastern University.

HOSPITALITY MANAGEMENT

PROGRAM DESCRIPTION
Bachelor of Business Administration
Hospitality Management
Bachelor of Applied Science
Hospitality Management
Associate of Applied Science
Hospitality Management
Minor
Hospitality Management

PROGRAM DESCRIPTION
The Bachelor of Applied Science (BAS) in Hospitality Management combines the technical skills and business proficiency necessary for success. A unique program, the BAS degree allows students who have already earned an AAS degree to build upon their technical specialties with essential learning courses and junior and senior level business courses. This allows associate degree holders to gain a 4-year degree in approximately four additional full-time semesters, depending upon prior coursework. Upon completion of the program, students will be technically and academically prepared for leadership positions in their chosen industries. Prospective students not holding an associate of applied science degree can begin their university career at CMU in a chosen field of study with a 2-year degree and then progress to a 4-year degree using the BAS. This degree will provide students with upward mobility in their area of employment as they move into supervision/management positions.

Upon completion of the Associate of Applied Science (AAS) in Hospitality Management, students will be prepared for an entry-level position in the broad and expanding hospitality industry, as well as be prepared to pursue the Bachelor of Applied Science in Hospitality Management. Business courses to be taken include courses in marketing, promotion, management, accounting, finance, small business management and entrepreneurship.

The minor in hospitality management is designed to prepare students to enter the world of hospitality management. Coursework in the areas of marketing, management and community tourism will provide students the basic skills needed in order to contribute more efficiently and effectively in the industry. For the student interested in the industry, a minor coupled with a bachelor's degree can increase the employment opportunities available in a variety of travel-related areas.

CONTACT INFORMATION
Department of Business, Dominguez Hall 309, 970.248.1778.

FACULTY

BRITT MATHWICH (2011), Assistant Professor of Business; BA, University of New Mexico; MA, Eastern New Mexico University.

HUMANITIES

PROGRAM DESCRIPTION
Associate of Arts
Humanities Emphasis

Program Description
The Associate of Arts (AA) degree can: 1) function as a terminal degree; and 2) function as a pathway into a baccalaureate degree in the humanities. A student who is granted this degree can transfer to any institution in Colorado and graduate in a baccalaureate degree program by taking no more than 60 hours from that institution. The same applies for students who decide to move from the AA program into any Colorado Mesa University BA program. By choosing the humanities emphasis, students can build a course of study that focuses on their area of interest in the following disciplines: creative writing, fine and performing arts, foreign languages, literature, mass communication, philosophy and/or speech.

CONTACT INFORMATION
Department of Languages, Literature and Mass Communication, Escalante Hall 237, 970.248.1687.

INFORMATION AND COMMUNICATION TECHNOLOGY

(Program pending final approval from CMU Board of Trustees)

PROGRAM DESCRIPTION
Associate of Applied Science
Information and Communication Technology
Technical Certificate
Technology Integration – Computer Technician (no longer admitting students)
Information and Communication Technology – Healthcare Information Networking
Information and Communication Technology – Help Desk Technician
Information and Communication Technology – Network Technician

PROGRAM DESCRIPTION
The Information and Communication Technology program will prepare you for a variety of specializations within the rapidly evolving Information and Communications Technology career field. The core of the program is the Cisco CCNA Networking

series of classes. These classes are the best path to achieving a Cisco Certified Network Associate certification. In addition, the program emphasizes technologies that the entry-level employee will encounter: network hardware and software; business-class computer hardware and software; convergent data/voice/media communication hardware and software; internet of things hardware and software; 3D printing hardware and software; UAS (drones) and robotics (land drones) hardware; and software and management.

Curriculum is accredited, approved and aligned with national and international certifications by major business and industry in the computing, networking and ICT career fields.

Program Strengths
- Modern labs using current technology, equipment and software
- Coursework aligned with national and international industry certifications including Cisco, A+/N+, CET, and Convergence Technology Professional (CTP)
- Hands-on application-based curriculum

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

INSURANCE

PROGRAM DESCRIPTION
Bachelor of Business Administration
Insurance (See Business)
Professional Certificate
Insurance

PROGRAM DESCRIPTION
The certificate in insurance is designed to certify students who possess the knowledge and skills needed to work as insurance agents. The certificate will provide students with a foundation for further study toward an insurance concentration in the BBA, which more fully prepares a person for a career in the insurance industry.

CONTACT INFORMATION
Department of Business, Dominguez Hall 309,
970.248.1778.

INTERNATIONAL STUDIES

PROGRAM DESCRIPTION
Minor
International Studies

PROGRAM DESCRIPTION
The international studies minor recognizes the complex interconnections between academic disciplines, peoples in cultural contexts and opportunities for social and economic advancement for our graduates. Students from a wide variety of disciplines can supplement their major in business, social sciences, natural sciences or humanities with an international focus through this minor. Students choose from a menu of options drawn from disciplines across the campus. The interdisciplinary nature of the international studies minor is essential for preparing students to enter the new global marketplace of ideas and goods. Students taking the international studies minor are encouraged to enhance their experience by participating in a variety of study abroad opportunities available while attending CMU.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

TIMOTHY CASEY (1998), Professor of Political Science; BS, Northern Arizona University; MA, University of San Francisco; PhD, Arizona State University.

WILLIAM FLANIK (2014), Assistant Professor of Political Science; BA, Virginia Commonwealth University; PhD, University of Toronto.

JAZZ STUDIES

(SEE MUSIC)

KINESIOLOGY

PROGRAM DESCRIPTION
Bachelor of Arts
Kinesiology – Adapted Physical Education
Kinesiology – Fitness & Health Promotion
Kinesiology – (K-12) Teaching
Certificate
Personal Training

PROGRAM DESCRIPTION
Students concentrating in adapted physical education will learn to adapt or modify the physical education curriculum and/or instruction to address specific abilities of individuals. Students will learn to develop activities that are appropriate and effective for persons with disabilities. Career opportunities include: adapted physical education teacher (K-12), which requires completing the K-12 concentration coursework; activity director at an assisted living center or rehabilitation facility; physical therapist;* and occupational therapist.*

Students enrolled in the fitness and health promotion concentration should have a strong interest in the sciences as this program applies science to human function. The student will explore exercise physiology, anatomical kinesiology, community health, physical activity and aging, worksite health promotion and sports nutrition, among other subject areas. Career opportunities include: sports and wellness program instructors and directors; strength coaches for college, university and professional sports programs*; managers and exercise leaders in corporate wellness programs; nutritionist;* occupational therapist;* and personal trainer.

(*Career requires additional post-baccalaureate studies.)

The K-12 teaching concentration prepares students to teach elementary, middle and high school physical education. The

degree plan includes coursework covering human anatomy and physiology, team and individual sports, exercise science and teaching methods courses. Students will gradually accumulate over 200 hours of classroom experience before beginning student teaching. School districts throughout western Colorado provide opportunities to gain experience with children of all ages and backgrounds in a variety of school settings. Before being admitted into the teacher education program, the following courses must be completed with a grade of B or better: ENGL 111, ENGL 112, PSYC 233, EDUC 115 and EDUC 215. A grade of C or better is required for MATH 110. Also, a minimum cumulative GPA of 2.8 (including transfer and CMU coursework) is required of all students for admission into the program.

Students enrolled in the personal training certificate should have a strong interest in fitness, health promotion and personal training. Students will engage in practical experiences that will help them with the possibility of a future career in personal training. Students will explore subject areas that include: anatomy, physiology, kinesiology, applications of physical fitness and exercise physiology.

For a program sheet that describes the requirements, see a faculty advisor or go to coloradomesa.edu/academics.

CONTACT INFORMATION
Department of Kinesiology; Maverick Center 237B, 970.248.1635.

FACULTY

RICHARD BELL (2005), Instructor of Kinesiology; BS, Clemson University; MA, The Citadel; JD, University of South Carolina; EdD, United States Sports Academy.

JILL CORDOVA (1992), Professor of Kinesiology; BA, MA, Humboldt State University; PhD, University of New Mexico.

KEITH FRITZ (1997), Professor of Kinesiology; BS, Oregon State University; MS, PhD, University of New Mexico.

CARMINE GRIECO (2015), Assistant Professor of Kinesiology; BS, University of Wyoming; MS, PhD, Old Dominion University.

JEREMY HAWKINS (2013), Associate Professor of Kinesiology and Department Head of Kinesiology; BS, Brigham Young University; MS, Oregon State University; PhD, Brigham Young University.

KRISTIN HEUMANN (2011), Associate Professor of Kinesiology; BA, Northwestern College; MS, PhD, Arizona State University.

ERIN LALLY (2016), Instructor of Kinesiology; BS, MS, Illinois State University.

STEVEN ROSS MURRAY (1998), Professor of Kinesiology; BS, University of North Alabama; MS, DA, Middle Tennessee State University.

MICHAEL REEDER (2015), Acting Director Monfort Family Human Performance Laboratory; BS, Youngstown State University; DO, Ohio University Heritage College of Osteopathic Medicine.

ELIZABETH SHARP (2011), Associate Professor of Kinesiology; BS, MEd, Arkansas Tech University; PhD, Middle Tennessee State University.

LAND SURVEYING AND GEOMATICS

PROGRAM DESCRIPTION
Associate of Applied Science
Land Surveying and Geomatics
Technical Certificate
Land Surveying and Geomatics

Program Description
The Land Surveying program prepares students to use equipment that is an integral part of land development for areas of engineering, construction projects and planning. Students learn to measure elevations, use equipment to measure on or below the surface and use technology to process data. The students will gain the knowledge needed for state certification.

All surveyor-specific courses can be completed for the two-year degree.

An on-line certificate program allows students who are already working as survey interns to complete the necessary computation/calculation, error analysis, and math and ethics coursework to enable them to take and successfully pass the state's Professional Surveyor Exam.

Land Surverying and Geomatics students will:

- Understand the fundamentals of land surveying;
- Use the components and use of Global Positioning Systems (GPS) and Geographical Information Systems (GIS) and be able to gather and analyze data from these systems;
- Develop spreadsheets and utilize other relevant computer programs (CAD and industry specific software programs) to provide accurate surveying analytics;

- Apply higher level mathematical concepts that are necessary to complete complex survey tasks (analytical geometry, upper level algebra, calculus, statistics);
- Utilize the Common Law roots of Boundary Law, its importance in maintaining accurate records and be able to apply those principles in surveying.
- Work within the ethical, as well as the practical, role of surveying, including the applicable state and local laws.

Career Opportunities
- Surveyors
- Geodetic Surveyors
- Soil and Water Conservationists
- Landscape Architects
- Title Examiners, Abstractors, and Searchers
- Appraisers, Real Estate

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

LIBERAL ARTS
(INTERDISCIPLINARY MAJOR)

PROGRAM DESCRIPTION
Bachelor of Arts
Liberal Arts
Elementary Education Option
General Studies Option
Accociate of Arts
Business Administration
Business Computer Information Systems
Early Childhood Education
Humanities
Social Science
Sport Management
University Studies
Associate of Science
Biology
Computer Science
Geology
Mathematics
Physics

PROGRAM DESCRIPTION
While Colorado Mesa University provides a wide range of programs, the university may not offer a standard bachelor's degree program that serves a student's particular need. A liberal arts degree, however, is designed to offer students the opportunity to craft a plan of study to suit their individual career and academic aspirations. Under the direction of an advisor, a liberal arts major will design a coherent program by choosing appropriate courses that focus on a very specific field of study.

The Center for Teacher Education offers a comprehensive program of study that leads to licensure in Colorado. Our professors are experienced, knowledgeable, accessible and dedicated to the improvement of public education. Faculty offer one-on-one guidance for course selection, field placements, student teaching and employment. The elementary licensure program provides teacher education candidates with a broad content knowledge and prepares them as teachers for grades kindergarten through six. Please see the Teacher Education Admission Packet for further information on admissions criteria.

CONTACT INFORMATION
Education Option:
Center for Teacher Education, Dominguez Hall 109,
970.248.1786.

General Studies Option:
Kurt Haas, Assistant Vice President of Academic Affairs, LHH 209,
970.248.1104

MANAGERIAL INFORMATICS
(SEE BUSINESS)

MANUFACTURING TECHNOLOGY

PROGRAM DESCRIPTION
Associate of Applied Science
Manufacturing Technology – Computer-Aided Design
Manufacturing Technology – Machining Technology
Manufacturing Technology – Welding Technology
Technical Certificate
Manufacturing Technology – Basic Welder
Manufacturing Technology – CAD/CAM
Manufacturing Technology – Computer-Aided Design Technology
Manufacturing Technology – Machine and Manufacturing Trades
Manufacturing Technology – Welding Technology

Program Description

Computer-Aided Design Technology
The Computer Aided Design program prepares the student for employment in Mechanical, Architectural and Civil Design. Through the use of current CAD software, students will build their skill level beginning with two dimensional drawings and working their way up to three dimensional solid based modeling. With the majority of the work completed on the computer and a project in the area of student's interest which ties the course to real world concepts. Career options include Architectural Drafter/Designer, Mechanical Drafter/ Designer and Civil Drafter/Designer.

Machine and Manufacturing Trades
The machining and manufacturing trades specialization offers classroom instruction and related lab work with hands-on activities in the use of tools and the operation of equipment found in manufacturing. Students work in the area of blueprint reading, computer numerical control (CNC), machining, general machining and maintenance, CAD and related mathematics. The program is designed to meet competency-based standards set by the industry. Attitude and quality of workmanship are stressed. Career options include entry level machinist, computer-numerical control operator, numerical

tool and process technician, manufacturing engineering technician and manufacturing inspection technician.

Machining Technology
The Associate of Applied Science with the manufacturing technology major offers classroom instruction and related lab work with hands-on activities in the use of tools and the operation of equipment found in manufacturing. In the machining technology emphasis students learn to apply industrial knowledge and skills to plan and implement designs, operate manual mills and lathes, operate computer-aided machinery with CAD/CAM software and computer-numerical controlled (CNC) machines. Students also develop the skills that enable them to read blueprints, apply appropriate mathematical concepts and understand the properties of metal and polymers. This course of study is designed to meet competency-based standards set by the manufacturing industry. With this degree, students will be qualified for the following employment opportunities: entry-level machinist, computer-numerical control operator, numerical tool and process technician, manufacturing engineering technician and manufacturing inspection technician.

Welding Technology
The welding technology program is designed to provide training and opportunity to become proficient at SMAW, GMAW, GTAW, FCAW, OAW, OAC, PAC, CAC-A on plate, and Robotic Welding with state-of-the art welding instruction. This program offers classroom lecture and related lab work. Students study welding, cutting, layout, fabrication and technical math. Safety, attitude and quality of workmanship are stressed throughout this course. The welding certificate prepares students for entry-level placement in a wide range of jobs in the welding industry and is designed to meet competency based standards set by the American Welding Society. This program trains students to become certified AWS, API, ASME welders in the welding industry.

The welding technology AAS degree prepares students for advanced level placement in a wide range of jobs in the welding industry and is designed to meet competency based standards set by the American Welding Society.

SPECIAL REQUIREMENTS
Physical requirements on the job include the ability to lift up to 50 pounds regularly and to stand for long periods of time while doing machine work. Average hearing and eyesight, natural or corrected, is desirable.

Certificate programs are designed to be employment directed for beginning level jobs. Students should check with a welding instructor/advisor about options for specialized employment training requiring a shorter period of training.

The Associate of Applied Science degree program includes many of the same technical courses as the technical certificate. Also included are mathematics and management courses that are essential for job advancement to more technical levels after employment.

Courses are designed to give students an adequate knowledge of metals, layout work and welding processes, along with an opportunity to gain manipulative skills and the related information needed to enter and progress in various welding occupations. Instruction and shop practice is offered in SMAW, GMAW, FCAW and GTAW of mild steel in all positions as well as pipe and specialty welding. Various cutting and fabrication methods are included. Students can arrange work experience as an elective part of the regular program after completing two semesters or more.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

FACULTY

MICHAEL CARLTON (2012), Technical Instructor of Manufacturing Technology–Machining; AA, Mesa Community College.

WILLIAM (BILL) CAMPBELL (2013), Technical Instructor of Manufacturing Technology-Welding; AAS, BS, Utah Valley University.

DENIS THIBODEAU (1999), Technical Instructor of Manufacturing Technology-CAD; AAS, Rogue Community College.

MASS COMMUNICATION

PROGRAM DESCRIPTION
Bachelor of Arts
Mass Communication – Media Strategies & Applications
Minor
Mass Communication

PROGRAM DESCRIPTION
The Bachelor of Arts in Mass Communication provides students with a concentration in media strategies and applications. The primary goal in the program is to offer students an opportunity to develop the knowledge, theory, and skills that will assist them in securing employment in the ever-changing, broad field of mass communication. Graduates of Colorado Mesa University's Mass Communication program find successful careers across the country in traditional mass media (magazines, newspapers, radio, and TV stations, public relations and advertising), as well as in non-traditional settings such as the Internet, non-profits and government agencies.

SPECIAL REQUIREMENTS
Continuation in the program after the sophomore year will be contingent upon the student's satisfying the following requirements:

1. Completion of the English Composition sequence with at least a 3.0 GPA (no grade below "B").
2. Completion of the two introductory courses (MASS 110 and MASS 213) in Mass Communication, with at least a 2.5 GPA and no grade of "D" or "F".
3. Maintenance of at least a 2.5 GPA in MASS courses, in addition to at least a 2.0 GPA overall, is necessary for Mass Communication majors to proceed to graduation.

CONTACT INFORMATION
Department of Languages, Literature and Mass Communication, Escalante Hall 237, 970.248.1687.

FACULTY

MEGAN FROMM (2015), Assistant Professor of Mass Communication; BA, Mesa State College; PhD, University of Maryland.

DANIEL GARRISON (2016), Instructor of Mass Communication; BS, Northwestern University; MS, Syracuse University.

GREGORY MIKOLAI (2011), Instructor of Mass Communication; BA, College of Saint Thomas.

JAMES PEREZ (2015), Assistant Professor of Mass Communication; BA, California State University; PhD, University of California-San Diego.

ERIC SANDSTROM (2011), Assistant Professor of Mass Communication; BA, MA, Miami (Ohio) University.

MATHEMATICS

PROGRAM DESCRIPTION

Bachelor of Science
- Mathematics
- Mathematics – Secondary Education
- Mathematics – Statistics

Associate of Science
- Mathematics Emphasis

Minors
- Mathematics
- Statistics

Program Description

An Associate of Science in Mathematics provides students with a reasonable exposure to foundational college-level mathematics. This degree program includes the Colorado Statewide General Education Core and meets the lower division general education requirements at most public institutions in Colorado. By completing this degree, students should be able to matriculate into a baccalaureate degree in mathematics with only 60 additional hours of coursework.

With a baccalaureate major in mathematics, students develop powerful problem-solving, logical and critical thinking skills.

By completing the required coursework, students gain an understanding of the nature of proof, a broad general understanding of mathematics and a deep understanding of at least one area of mathematics. Math majors also develop independent learning skills and oral and written mathematical communication skills. Mathematics majors get jobs in a wide variety of areas. Our graduates have worked for local businesses, have run their own businesses and have worked for scientific companies. Other graduates have continued their educations by attending graduate school (in mathematics, computer science and engineering), law school, medical school and veterinary school.

Students who pursue a major in mathematics with a concentration in applied mathematics will develop powerful problem-solving, logical, and critical thinking skills. Students will use methods of applied mathematics from areas including modeling, linear algebra, ordinary and partial differential equations, numerical methods, computer programming, and statistics to model and solve applied problems. Students will also gain an understanding of the nature of proof and will complete a senior capstone project that includes developing research skills, writing skills, and presentation skills. Applied mathematics graduates can choose to find work in a variety of areas within business, industry, and government or may choose to continue their educations by attending graduate school in areas such as applied mathematics, computer science, and engineering.

The major in mathematics with a concentration in secondary education will prepare students to teach in both middle schools and in high schools. While completing this degree, students develop problem-solving and critical thinking skills and are introduced to the logical and historical development of mathematical ideas. Students also learn the professional skills in teaching methods and content necessary for secondary mathematics teachers. Nationally recommended curriculum guidelines are followed in order to ensure that graduates have the mathematical content and conceptual understanding necessary for all high school mathematics courses. Graduates from this program are in demand both locally and statewide with the scarcity of mathematics teachers.

With a major in mathematics with a concentration in statistics, students develop problem-solving, logical and critical thinking skills. While completing the required coursework, students gain an understanding of the nature of proof, a general understanding of mathematics and an understanding of statistical reasoning, necessary assumptions and the correct use of statistical analysis procedures. Math and statistics majors also develop statistical software skills and oral and written mathematical communication skills. The statistics concentration in mathematics prepares students for graduate work in statistics or to enter the job force. With some additional job-specific training, students entering the job market could function as applied statisticians working in areas such as actuarial science, wildlife management, marketing, quality control and epidemiology to name a few.

A minor in mathematics is a natural enhancement to many majors outside mathematics where an understanding of mathematics is needed (e.g. physics, computer science, chemistry, biology, geology). A minor in mathematics enables

non-mathematics majors to complete a focused course of study in mathematics on a smaller scale.

A minor in statistics is a natural enhancement to many majors outside mathematics where an understanding of statistical analysis of data is needed (e.g. biology, business, psychology, sociology, history, human performance and wellness, political science). A minor in statistics enables non-mathematics majors to complete a focused course of study in statistics on a smaller scale.

SPECIAL REQUIREMENTS
Additional expenses: A graphing calculator is recommended for several mathematics and statistics courses. See department for recommended models.

CONTACT INFORMATION
Department of Computer Science, Mathematics and Statistics, Wubben Science 132,
970.248.1407.

FACULTY

ANDREA BARNARD (2013), Instructor of Mathematics Education; BS, BYU-Idaho; MEd, University of Texas.

CATHERINE BONAN-HAMADA (1996), Professor of Mathematics; BS, MS, Colorado State University; PhD, University of Colorado.

EDWARD BONAN-HAMADA (1997), Associate Professor of Mathematics; BA, University of Rochester; MA, University of Hawaii; PhD, University of Colorado.

LISA DRISKELL (2010), Associate Professor of Mathematics; BS, Central Michigan University; PhD, Purdue University.

MARCUS FISCHER (2011), Instructor of Mathematics; BS, Mesa State College; MS, Ruhr Universität Bochum.

TRACII FRIEDMAN (2002), Professor of Mathematics; BS, Saint Joseph's University-Philadelphia; MS, PhD, Lehigh University.

PHILIP GUSTAFSON (1998), Professor of Mathematics; BS, State University of New York-Oneonta; MS, PhD, Washington State University.

HEATH HILLMAN (2016), Instructor of Mathematics; BS, Colorado Mesa University; MS, Youngstown State University.

MAX L. MCFARLAND (2010), Instructor of Mathematics; AS, Colorado Mesa University; BS, Mesa State College; MS, University of Colorado.

ERIC MILES (2015), Assistant Professor of Mathematics; BS, Colorado Mesa University; PhD, Colorado State University.

RICHARD OTT (2006), Associate Professor of Statistics; BS, St. Mary's University; MS, University of Missouri-Rolla; PhD, Rice University.

ERIK PACKARD (1996), Associate Professor of Mathematics; BS, MS, PhD, Texas Tech University.

LORI PAYNE (1996), Professor of Mathematics and Computer Science and Department Head of Computer Science, Mathematics and Statistics; BA, Mesa College; MS, New Mexico Institute of Mining and Technology; PhD, University of Northern Colorado.

MARKUS REITENBACH (2006), Associate Professor of Mathematics; MS, University of Ulm; PhD, Syracuse University.

MOLLY RYAN (2013), Instructor of Mathematics; BS, University of Northern Colorado; MA, Adams State University.

DANIEL SCHULTZ-ELA (2006), Associate Professor of Mathematics Education; BA, Carleton College; MS, Brown University; PhD, University of Minnesota.

RISHARRA STULC (2013), Instructor of Mathematics; BS, University of Northern Colorado; MEd, Grand Canyon University.

WAYN KAUI WARD (2010), Instructor of Mathematics; BS, Mesa State College; MS, University of Nevada, Las Vegas.

ZHONG WU (1989), Professor of Mathematics; BS, China University of Science and Technology; PhD, University of Cambridge.

MECHANICAL ENGINEERING

PROGRAM DESCRIPTION
Bachelor of Science
Civil Engineering
Mechanical Engineering
(degreea awarded by the University of Colorado Boulder)

Colorado Mesa University and the University of Colorado Boulder have created a partnership to deliver a mechanical engineering program in its entirety in Grand Junction. The CMU/CU-Boulder Mechanical Engineering Partnership Program prepares students for careers in a wide range of industries through the rigorous study of mechanical engineering. Students completing the program will be awarded a Bachelor of Science in Civil or Mechanical Engineering degree from CU-Boulder.

Special Requirements
Students enter CMU as "pre-engineering" majors. They may apply to the Mechanical Engineering Partnership Program:

- After one year at CMU if they have completed a two-course sequence in calculus and a two-course sequence in physical science with As or Bs and have an overall GPA of 3.0 or better, or
- After completing all required lower-division coursework at CMU with a GPA in technical courses (calculus, science, and engineering) of 3.0 or better

Interested students can learn more about the program and admission options at coloradomesa.edu/engineering.

CONTACT INFORMATION
Archuleta Engineering Center, 2510 Foresight Circle,
Grand Junction, CO, 81505,
970.248.1400
-or-
Brigitte Sundermann
WCCC Building A 122
970.255.2700.

DEPARTMENT HEAD ENGINEERING

BRIGITTE SUNDERMANN, (2001) Associate Technical Professor of Manufacturing Technology-CAD; BSCE, Colorado State University; M.B.A., University of Phoenix; PhD (ABD), Colorado State Univeristy

ENGINEERING PARTNERSHIP PROGRAM DIRECTOR

TIMOTHY BROWER (2009), Director, CMU/CU-Boulder Mechanical Engineering Partnership Program; BS, Idaho State University; MS, Montana State University; PhD, Colorado State University.

CMU ENGINEERING DEPARTMENT HEAD

BRIGITTE SUNDERMANN

FACULTY

ANDREW AFFRUNTI (2011), CU Instructor of Mechanical Engineering; BS, MS, University of Illinois - Urbana.

KELLY BEVILL (2011), Assistant Professor of Construction Management; BS, University of Colorado-Boulder; MS, Cornell University.

SCOTT BEVILL (2010), Associate Professor of Mechanical Engineering Technology; BS, University of Denver; MS, PhD, Stanford University.

FRANCISCO CASTRO (2010), CU Instructor of Mechanical Engineering; BS, Pontifical Catholic University of Peru; MS, University of Colorado, Denver;PhD, University of Colorado, Boulder.

B. SCOTT KESSLER (2011), Associate Professor of Mechanical Engineering Technology; BS, MS, PhD, University of Missouri.

SARAH LANCI (2015), Assistant Professor of Mechanical Engineering Technology; BS, Michigan State University; MS, Colorado School of Mines.

NATHAN MCNEILL (2012), CU Instructor of Mechanical Engineering; BS, WallaWalla University; MS, Georgia Institute of Technology; PhD, Purdue University.

PETER MITRANO (2016) CU Instructor of Mechanical Engineering; BS, University of New Hampshire; PhD, University of Colorado - Boulder.

CHRIS PENICK (2016) CU Instructor of Mechanichal Engineering; BS, Wright State Univesity; MS, University of Dayton.

MECHANICAL ENGINEERING TECHNOLOGY

PROGRAM DESCRIPTION

Bachelor of Science
Mechanical Engineering Technology
Associate of Applied Science
Mechanical Engineering Technology

PROGRAM DESCRIPTION

The objective of the mechanical engineering technology program is to provide the knowledge necessary to apply

state-of-the-art techniques to design and build products and systems to meet the current and future needs of society. The mechanical engineering technology major is designed for a student who is a doer or implementer--one who is able to apply mathematics, the natural and engineering sciences, engineering principles and current engineering practices to the solution of design problems and to the operation and testing of mechanical systems.

Laboratory courses are an integral component of the mechanical engineering technology program and are designed to develop student competence to apply experimental design methods, as well as provide a "hands-on" approach to designing and building products and systems to meet the current and future needs of society.

The Associate of Applied Science in Mechanical Engineering Technology provides graduates the skills and knowledge for a successful transition to either a career as a mechanical engineering technician or to continue in the Bachelor of Science program.

CONTACT INFORMATION

Archuleta Engineering Center, 2510 Foresight Circle,
Grand Junction, CO, 81505,
970.248.1400

PROGRAM DIRECTOR

TIMOTHY BROWER (2009), Director, CMU/CU-Boulder Mechanical Engineering Partnership Program; BS, Idaho State University; MS, Montana State University; PhD, Colorado State University.

FACULTY

SCOTT BEVILL (2010), Associate Professor of Mechanical Engineering Technology; BS, University of Denver; MS, PhD, Stanford University.

Learn more about the programs of study listed here, and find program sheets detailing exact and complete requirements for majors and concentrations, online at ***coloradomesa.edu/academics****.*

B. SCOTT KESSLER (2011), Associate Professor of Mechanical Engineering Technology; BS, MS, PhD, University of Missouri.

SARAH LANCI (2015), Assistant Professor of Mechanical Engineering Technology; BS, Michigan State University; MS, Colorado School of Mines.

MEDICAL LABORATORY TECHNICIAN

PROGRAM DESCRIPTION
Associate of Applied Science
Medical Laboratory Technician

PROGRAM DESCRIPTION
The Medical Laboratory Technician (MLT) Program at Colorado Mesa University is five semesters in length. Essential Learning requirements and foundation courses are taken the first year and summer, the second year consists mainly of MLT program courses, followed by one semester of clinical internship at an affiliated site in western Colorado.

The majority of MLT courses are delivered in a hybrid format. Lecture is delivered online with lab sessions held on campus. All MLT courses are taken concurrently for each semester offered and in sequence starting in the fall.

The student will receive an Associate of Applied Science degree upon successful completion of the program. The graduate is eligible to take the Medical Laboratory Technician national certification exam through the American Society of Clinical Pathologists (ASCP). A passing score on the ASCP exam will allow the student to use the credentials of MLT (ASCP) CM after their name.

Phlebotomy courses are also offered to non-degree seeking students on a permission and space available basis; see the health sciences department for additional information.

SPECIAL REQUIREMENTS
Admission into the University does not guarantee admission into the medical laboratory technology program which requires a separate application submitted in the spring for fall semester courses. Students planning on enrolling in medical laboratory technology courses must submit additional requirements. See the health sciences department for additional information.

CONTACT INFORMATION
Department of Health Sciences, Maverick Center 167, 970.248.1398.

FACULTY

TRACY MATTHEWS (2010), MLS, (ASCP) CM; MLT Instructor of Medical Laboratory Technology; BS, University of Arkansas for Medical Sciences; MS, University of North Dakota.

MEDICAL OFFICE ASSISTANT

PROGRAM DESCRIPTION
Associate of Applied Science
Medical Office Assistant
Technical Certificate
Medical Office Assistant

Program Description
This program prepares individuals to perform routine clinical and administrative functions in health care facilities, primarily medical clinics or physician's offices. Students who successfully complete this program will be able to perform the administrative tasks of a medical receptionist and work in the clinical areas by providing assistance with physical examinations, diagnostic tests and treatment procedures. All students who successfully complete the program are eligible to take the National Certification Examination offered by the American Medical Technologists, a national certifying agency, to become a Registered Medical Assistant.

Students admitted to health care programs must undergo a background check and maintain current CPR certification and professional liability insurance.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

MUSIC

PROGRAM DESCRIPTION
Bachelor of Arts
Music - Liberal Arts
Bachelor of Music
Music with Elective Studies in Business
Music Performance
Bachelor of Music Education
Music Education (K-12)
Minor
Jazz Studies
Music (Instrumental or Vocal)

PROGRAM DESCRIPTION
The Bachelor of Music with Elective Studies in Business is designed for students who desire a career within the music industry. The comprehensive core curriculum in music includes courses in theory, history, literature, music technology, improvisation, applied study on the major instrument or voice and ensemble performance. Also included are specialized courses in Music Industry and Marketing, Entrepreneurship and Advanced Music Technology. Required business courses include the areas of Marketing, Management, Accounting, Economics, and the Legal Environment of Business. This degree will also result in completion of the requirements for a Certificate in Entrepreneurship. Finally, an internship component provides the opportunity for students to gain real world experience in the music industry areas of their choice. Professional success in the musical arts requires a comprehensive understanding

of the new business models at work in our digital world. Our program seeks to provide this up-to-date information to enhance success for the student at every level.

The Bachelor of Music Performance is designed for those students who desire a performance-focused career. A strong core curriculum of musicianship courses includes music theory, history, literature, pedagogy, ensemble performance, and applied study. These courses develop the student's abilities and prepare them to perform in a plethora of venues and genres such as symphony orchestras, chamber ensembles, armed forces ensembles, musical theaters, opera, and countless entertainment venues. As a musician in the 21st Century, this degree also seeks to create excellent performers who "create their own future and not simply enter a future that's been created for them." A second goal of this program is to train musicians with current skills so they have the ability to make their own opportunities, shape their careers like entrepreneurs, produce their own performances, collaborate with artists from other genres and art forms and perform at a high artistic level. Training in the following areas will assist performers to create a meaningful career in music: Creating and Leveraging a Personal Network, Developing and Executing an Action Plan, Identifying Entrepreneurial Opportunities in Music and the Creative Sector, Interdisciplinary Collaborations, E Marketing your Music, Creating an Artist's Digital Portfolio, Video Marketing, Independent Business Website.

The Music Education K-12 degree provides students with the knowledge, skills, and musicianship to become a successful music educator. Studies in music theory, history, literature, ensemble performance, and applied study give the student a strong foundation on which to build a successful teaching career. Classes in conducting, instrumental, choral, and elementary techniques as well as music education philosophy develop the skills and knowledge needed for a rewarding career as a K-12 educator. These skills and knowledge are applied during field experiences as well as during the student teaching internship. Please see the Teacher Education Admission Packet for further information on admissions criteria.

The BA in Music with a concentration in liberal arts is designed to meet the needs of students seeking extended training in music combined with essential learning courses and academic courses of their choosing. This degree includes music studies as well as the flexibility to pursue other academic areas of interest. Music majors admitted to this liberal arts concentration will be strong in music and academics and along with their music training will achieve both broad and specific learning in other academic areas. They will be prepared to pursue graduate studies in music and careers in many areas of music and the arts.

The minor in instrumental music offers students in other majors the opportunity to stay involved with music in college, gaining experience and skills in music lessons, ensembles and academics. The minor includes three years of ensembles and lessons on an applied instrument; academic courses in music theory, appreciation and literature; as well as an upper division elective.

The vocal music minor provides training and performance opportunities for students seeking music development in voice as their secondary area of study. Fundamental studies in piano, music reading and theory, two years of voice lessons, three years of performing in choral ensembles, studies in diction and conducting and performance training in opera scenes comprise this minor. Audition for acceptance into the vocal minor is required.

The jazz studies minor provides the opportunity for students to obtain a comprehensive set of fundamental skills in the jazz area, including large-ensemble performance, small-group performance, improvisation, composition and arranging, history and literature, and private instruction. Music majors who add this minor will broaden their skill set and marketability beyond the classical music area, and non-music majors may add this minor as a secondary area of study. Entrance to the jazz studies minor requires an audition and prior jazz experience.

SPECIAL REQUIREMENTS

Students seeking admittance as a music major must pass a performance audition, a music theory placement exam and a piano proficiency assessment. Admission to Colorado Mesa University does not guarantee admission into a music degree program. Prospective music majors should consult the music department website or contact the music department for information about audition material and scheduling an audition with the faculty in their area of interest.

Following the audition, students will be notified by letter regarding audition results. Students admitted as new music majors will be assigned an advisor and should plan to attend an orientation, registration and advising session. If the advisor is unavailable, students should contact the Department Head of Music.

CONTACT INFORMATION

Department of Music, Moss Performing Arts Center 113, 970.248.1233.

FACULTY

WILLIAM AIKENS (2016), Instructor of Music; BS, Duquesne University; BM, University of Cincinnati; DMA, Arizona State University.

GRAHAM ANDURI (2016), Assistant Professor of Music; BM, Colorado State University; MM, Univeristy of Florida; DMA, The University of Southern Mississippi.

MONTE ATKINSON (1985), Professor of Music; AS, Snow College-Utah; BFA, Utah State University; MM, DMA, University of Illinois.

SEAN FLANIGAN (2006), Associate Professor of Music; BS, MM, University of Illinois; DMA, University of North Texas.

JONATHAN HINKLE (2012), Assistant Professor of Music; BME, MME, PhD, Florida State University.

CALVIN HOFER (1998), Professor of Music and Department Head of Music; BA, South Dakota State University; MME, University of Wisconsin; DMA, University of North Texas.

ARTHUR HOULE (2006), Professor of Music; BM, University of Massachusetts-Lowell; MM, New England Conservatory; DMA, University of Iowa.

DARIN KAMSTRA (2004), Professor of Music; BA, BM, Eastern Washington University; MM, University of Northern Colorado; DMA, University of Illinois at Urbana-Champaign.

KRISTEN YEON-JI YUN (2012), Assistant Professor of Music; BM, MM, Seoul (Korea) National University; DMA, Indiana University.

JUN WATABE (2014), Assistant Professor of Music; BM, Aichi Prefectural University of Fine Arts and Music (Japan); MM, University of Northern Colorado; DA, University of Northern Colorado.

NURSE AIDE

PROGRAM DESCRIPTION
Technical Certificate
Nurse Aide

Program Description
The nurse aide certificate provides the student with entry-level skills required for employment as an aide in a long-term care facility, an acute care facility, or a home health care agency. Special needs of the geriatric population are emphasized. Students who successfully complete this certificate qualify to take the State Certification Examination. Instruction includes basic nursing assistant procedures, skills, restorative services, general household activities, patient care, safety and emergency care. Students gain an understanding of the responsibilities involved in working with patients of all ages, in both wellness and illness, and issues of mental health, patient rights and patient/family interactions. A minimum of 107 hours of training is required.
Students admitted to nursing programs must undergo a background check and maintain current CPR certification and professional liability insurance.

Students admitted to health care programs must undergo a background check and maintain current CPR certification and professional liability insurance.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

NURSING

PROGRAM DESCRIPTION
Doctor of Nursing Practice
Master of Science in Nursing
Advanced Nursing Practice
Nursing Education
Nursing Leadership and Administration
Bachelor of Science in Nursing
Nursing
Nursing, LPN – BSN
Nursing, RN – BSN
Technical Certificate
Practical Nurse

Program Description
The practical nurse (PN) program is designed for students interested in an entry-level position in the nursing career ladder program. The PN program is accredited by the Accreditation Commission for Education in Nursing (ACEN) and has full approval by the Colorado State Board of Nursing. Completion of the PN certificate allows students to progress for advanced placement in the Bachelor of Science in Nursing degree. The PN program prepares the student to be a direct care giver in hospitals, long-term facilities and ambulatory care-clinic settings. The potential student must demonstrate college-level proficiency in reading and writing in order to be admitted to this program. This program has selective admission requirements. It is the student's responsibility to obtain the current admission requirements. Admission to the University does not guarantee admission to the program; a separate admission application to the program is required. The LPN – BSN is a three semester program starting the spring after completion.

The LPN–BSN program for licensed practical nurses who are seeking to obtain an RN degree opens up greater employment opportunities, increased compensation and more job security. The LPN–BSN program is accredited by the American Association of Colleges of Nursing (CCNE) and has full approval by the Colorado State Board of Nursing. The LPN–BSN program offers a balance between general college and nursing education and prepares students to be a direct caregiver in hospitals, long-term facilities and ambulatory care-clinic settings. This program has selective admission requirements and requirements. It is the student's responsibility to obtain the current admission requirements. Admission to the University does not guarantee admission to the program; a separate admission application to the program is required.

The RN-BSN nursing program enrolls Registered Nurses with current RN licenses from associate degree and diploma programs to the baccalaureate program with advanced

standing. The Registered Nurse student will be considered in terms of the Colorado Nursing Articulation Model. The RN may complete the professional component of the program by attending college full time or part time online. The RN to BSN program offers an accelerated model of instruction. Courses will be offered
in a 7-week online format. There will be five start dates for the 7-week format and students may take one or two classes per session. The Registered Nurse to Bachelor of Science in Nursing programs have full approval by the Colorado State Board of Nursing and are accredited by the Commission on Collegiate Nursing Education (CCNE). The programs are designed for associate and diploma RN's. Admission to the University does not guarantee admission to the program; a separate admission application to the program is required.

The Bachelor of Science in Nursing (BSN) is designed for high school graduates and students without prior nursing certificates or degrees. The four and a half year program provides educational experiences which prepare a professional nurse generalist to practice in a variety of health care settings. The program integrates nursing theory, practice and science with a broad liberal arts education. It has been developed to prepare highly competent professionals with the education necessary to meet the increasing needs for quality health care in society and provides students with the foundation for graduate study in nursing. Admission to the University does not guarantee admission to the program; a separate admission application to the program is required.

The Master of Science in Nursing (MSN) program is designed for students already possessing a baccalaureate degree in nursing, a Registered Nurse License, and adds the first graduate step on the nursing career ladder. The MSN degree will provide graduates with a foundation for practice as a leader and educator in health care systems or academic settings. The MSN program is a hybrid format, providing flexibility for students to remain in their current work positions and home communities in western Colorado using online course delivery methods; this format provides opportunities for personal interaction with faculty and peers in focused intensive sessions at selected points during each semester. MSN graduates will be prepared to advance to higher levels of nursing education including Doctor of Nursing Practice (DNP) or Doctoral of Philosophy in Nursing (PhD) programs. Admission to the University does not guarantee admission to the program; a separate admission application to the program is required. The MSN graduate nursing program is accredited by the Commission of Collegiate Nursing Education (CCNE).

The Doctor of Nursing Practice (DNP) degree is designed for those nurses who are interested in assuming an advance practice nursing role as a Family Nurse Practitioner (FNP). DNP graduates are prepared as clinical experts in the delivery of primary care, with a focus on critical thinking, leadership, and political policy skills needed to advocate and create changes in healthcare practice at all levels. The program is a hybrid format, providing flexibility for students to remain in their current work positions and home communities in western Colorado using online course delivery methods. Opportunities for personal interaction are included with faculty and peers in focused intensive sessions at selected points during each semester. Admission to the University does not guarantee admission to the program; a separate admission application to the program is required. The DNP graduate nursing program is accredited by the Commission of Collegiate Nursing Education (CCNE).

SPECIAL REQUIREMENTS

Admission to Colorado Mesa University does not guarantee admission into the nursing program, which requires a separate application. Please contact the Health Sciences Department for additional information.

Progression requirements: All nursing courses must be completed in sequence. All required 200 level courses must be completed before 300 level nursing courses may be taken. All required 300 level courses must be completed before 400 level nursing courses may be taken. Students must complete all 200 level nursing courses or be an (RN) advanced placement student to enroll in the nursing elective courses.

Students transferring in credit for human anatomy and physiology taken at out-of-state accredited colleges/ universities must provide evidence that these courses had separate laboratory components before the course can be accepted to fulfill program requirements.

Any RN or LPN who desires to enroll in a nursing course for personal enrichment only must secure permission from the course instructor.

The MSN is the fourth rung of the nursing career ladder at Colorado Mesa University. Admission requires a Bachelor of Nursing degree from a nationally accredited institution. Prior learning experiences will be evaluated on an individual basis.

The DNP program is the final step on the nursing career ladder at Colorado Mesa University. MSN/Advanced Practice prepared registered nurses must submit a separate application for the DNP program. Prior learning experiences will be evaluated on an individual basis.

High school courses in biology, chemistry and algebra are recommended. All non-nursing college courses must be completed before a student can be admitted to the nursing programs. An admission committee selects students from applicants who best meet requirements. All admission materials must be on file in the Department of Health Sciences office prior to deadlines established for each program:

LPN Program: March 1 for fall entrance

LPN–BSN Program: October 1 for spring entrance

BSN Program: September 15 for spring entrance, or February 15 for fall entrance

RN-BSN: Five start dates, please see dates online

MSN Program: November 1 for spring entrance, April 1 for summer/fall entrance

DNP Program: November 1 for spring entrance, April 1 for summer/fall entrance

Students admitted to nursing programs must undergo a background check and drug screening, and maintain current CPR certification and professional liability insurance.

Learn more about the programs of study listed here, and find program sheets detailing exact and complete requirements for majors and concentrations, online at ***coloradomesa.edu/academics****.*

Undergraduate students must have a 2.0 ("C") on a 4.0 scale or higher grade for all courses required for completion of the undergraduate nursing programs (PN, AAS, BSN, RN-BSN). This policy applies regardless of when the course was taken.

Graduate students must have a 3.0 ("B") on a 4.0 scale or higher grade for all courses required for completion of the graduate nursing programs (MSN, DNP). This policy applies regardless of when the courses were taken. A "C" grade or lower in any required course will not count toward graduation requirements. See Graduate Programs section of this catalog for complete degree requirements.

CONTACT INFORMATION
Department of Health Sciences, Health Sciences 101, 970.248.1398.

FACULTY

SHAUNA ACKER (2013), Assistant Professor of Nursing; BSN, MSN, Graceland University Iowa; DNP, University of Colorado at Colorado Springs.

DEBRA BAILEY, RN (2006), Associate Professor of Nursing and Director of Health Sciences; AS, BSN, Mesa State College; MS, University of Colorado; MS, FNP, University of Colorado; PhD, University of Colorado.

DIANA BAILEY, RN (2010), Assistant Professor of Nursing; AS, BSN, Mesa State College; MSN, Walden University.

THERESA CHASE (2015), Instructor of Nursing; BA, Western State College; MA, University of Santa Monica; MA, University of Denver; ND, University of Colorado.

KELLY COFFIN, RN (2009), Instructor of Nursing; AS, BSN, Washburn University; MSN, Walden University.

LYNN DUNCAN (2011), Instructor of Nursing; BSN, South Dakota State University.

JULIET EVANS (2012), Instructor of Nursing; BSN Colorado Mesa University.

CATHY FELLER, RN (2011), Assistant Professor of Nursing; BSN, University of Maine; MSN, Walden University.

AMANDA GAUTHIER (2016), Assistant Professor of Nursing; BSN, MSN, University of Colorado.

SUSAN GOEBEL, RN (1998), Associate Professor of Nursing; BSN, MS, University of North Dakota.

LUCY GRAHAM (2016), Assistant Professor of Nursing; BSN, BA, University of Kansas; MPH, Univerity of Northern Colorado; PhD, University of Colorado.

KATHLEEN HALL (2015), Assistant Professor of Nursing; BS, University of Maryland; BSN, University of Alabama Huntsville; MS, University of Arizona; PhD, University of Arizona.

JANICE HOLVOET (2016), Assistant Professor of Nursing; BSN, MSN, PhD, University of Colorado.

KINDRA LOYD (2014), Instructor of Nursing; BSE, Southwest Missouri State University; BSN, University of Colorado Health Sciences; MSN, University of Colorado Health Sciences Center.

BRIDGET MARSHALL (2012), Assistant Professor of Nursing; DNP, University of Utah; BS, MS, University of Colorado.

SUSAN MATHEWS (2007), Instructor of Nursing; ASN, Excelsior College; BA, Otterbein College; BS, Adams State College; BSN, Colorado Mesa University; NREMT-P, Pueblo Community College; ASCP, St. Elizabeth Hospital.

SANDRA NADELSON (2016), Associate Professor of Nursing; BSN, Oregon Health Sciences University; MSN, California State University Los Angeles; PhD University of Nevada Las Vegas.

LINDA PILCHER (2013), Instructor of Nursing; ADN, Mesa College; BA, Western State College; BSN, MSN, South University.

CATHY SHAWCROFT (2009), Instructor of Nursing; BSN, Colorado Mesa University, MSN, Walden University.

GENELL STITES, RN (2008), Associate Professor of Nursing; BSN, University of Northern Colorado; MSN, Regis University.

KAREN URBAN (2011), Assistant Professor of Nursing; BSN, MSN, University of Pittsburgh.

JUDY WILLIAMS, RN (2010), Assistant Professor of Nursing; BSN, Mesa State College; MSN, Walden University.

PARAMEDIC

(SEE EMERGENCY MEDICAL SERVICES)

PEACE OFFICER STANDARDS AND TRAINING (POST)

PROGRAM DESCRIPTION
Technical Certificate
Police Officer Standards and Training (POST)

Program Description
This police academy certificate program exceeds the Colorado Peace Officers Standards Training (POST) requirements for peace officer entry level training. The individual training requirements for arrest control, law enforcement driving and firearms are included in the program. Students enrolled in the program will earn 31 credit hours that may be applied towards an associate's or bachelor's of applied science degree at Colorado Mesa University.

Students admitted to the POST program must undergo a comprehensive background check.

For a program sheet that describes the requirements, see a faculty advisor or go to coloradomesa.edu/academics.

SPECIAL REQUIREMENTS
This is a 16-week program that requires full time participation during the weeks of enrollment. The program is not an open enrollment and requires a separate application to the academy. See the academy director for details.

CONTACT INFORMATION
Director, Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

FACULTY

JOHN PIATANESI (2013), Academy Director; BA, Western Illinois University.

JANE QUIMBY (2012), Director of Public Safety; BS, University of Utah; JD, Denver University.

PERSONAL TRAINING

(SEE KINESIOLOGY)

PHILOSOPHY

PROGRAM DESCRIPTION
Minor
Philosophy

Program Description
Philosophy explores fundamental questions: What is real? What is beauty? How should we behave? How do we know what we know? The answers to these questions apply to all other disciplines, problems and life endeavors. While a career in philosophy usually means teaching philosophy, many professionals—writers, journalists, psychologists, doctors, lawyers, scientists, among others—have degrees in philosophy because their work requires critical thinking and an attention to assumptions and logic.

For a program sheet that describes the requirements, see a faculty advisor or go to coloradomesa.edu/academics.

CONTACT INFORMATION
Department of Languages, Literature and Mass Communication, Escalante Hall 237, 970.248.1687.

FACULTY

LES MILLER (2005), Associate Professor of Philosophy; BA, Mesa State College; MA, PhD, Claremont Graduate University.

PHYSICS

PROGRAM DESCRIPTION
Bachelor of Science
Physics
Associate of Science
Physics Emphasis
Minors
Physics

Program Description
The physics concentration serves as a foundation for a wide array of careers. Physics is the study of the universe: what it's made of and how it works, ranging from stars and galaxies to atoms and nuclei and everything in between. Physics forms the foundation of many technical fields including electronics and optics and also features prominently in many of the hottest areas of current research and innovation, such as the multidisciplinary fields of nanotechnology and biophysics. Physics majors have gone on to graduate programs in physics, materials sciences, aerospace engineering and electrical engineering and to medical school. They have also gone directly into jobs in engineering, business and research.

Physics forms the foundation of many technical and scientific fields. A physics minor is a good complement to a mathematics, chemistry, geology, environmental science or biology major.

CONTACT INFORMATION
Department of Physical and Environmental Sciences, Wubben Science 232, 970.248.1993.

FACULTY

DAVID COLLINS (2006), Professor of Physics; BS, Rhodes University; PhD, University of Texas-Austin.

BRIAN HOSTERMAN (2014), Assistant Professor of Physics; BS, Denison University; MS, PhD, University of Nevada-Las Vegas.

CHAD MIDDLETON (2006), Professor of Physics; BS, Eastern Illinois University; PhD, University of Tennessee, Knoxville.

ANWAR SHIEKH (2010), Lecturer of Physics; BS, PhD, Imperial College, London University.

JARED WORKMAN (2011), Associate Professor of Physics; BS, Temple University; MS, PhD, University of Colorado.

POLITICAL SCIENCE

PROGRAM DESCRIPTION

Bachelor of Arts
Political Science
Minor
Political Science

Program Description
The political science program provides students with a working knowledge of the concepts, theories, approaches and practical applications of political and governmental systems within the local, state, national and international arenas. Graduates are equipped to compete in the job market and the marketplace of ideas.

Regarding the job market, majors work closely with their academic advisor to customize a curriculum that prepares them for competitive applications to law or graduate school, and/or careers in government, non-profit organizations, global advocacy, business, military or homeland security, and emergency management. In addition to holding elective office, graduates have worked as lobbyists, congressional staff members, gubernatorial staff, and state agency officials. Graduates have also been admitted to law school or graduate school at: Denver University, Cornell University, Colorado State University, The University of Minnesota, the University of New Mexico, UC Denver, and the University of Colorado. Internship opportunities allow students to gain experience and employment while furthering their education. Recent interns have served in the U.S. Congress, the Colorado General Assembly, the Mesa County District Attorney's Office, state-level agencies, for the City of Fruita, and for congressional campaigns. Many former student interns are now working in jobs they obtained directly as a result of their internship experience.

Regarding the marketplace of ideas, the program builds engaged, global citizens who explore all sides of issues, think critically, communicate clearly, and use their skills responsibly. To that end, students have worked with faculty on research projects (as volunteers or as paid research assistants) on recreation management, natural resource management, and economic development. The program culminates in a senior seminar where students develop original research projects. Recent topics included studies on minority exclusion from the environmental movement, the sponsorship of pro and anti-marijuana legalization campaigns, the causes of international terrorism, the impact of high school civics education on voter turnout, and migrant labor in the European Union. Faculty sponsor a Political Science Club, a local chapter of the national honor society Pi Sigma Alpha, and the International Relations Club.

A minor in political science is an excellent complement for students majoring in many other fields, particularly mass communications, business, and criminal justice. The minor provides a diverse understanding of politics and government organizations; this is helpful to anyone working in a career that is either regulated by government, has government as a customer, or needs to lobby government to protect its interests.

Desmond Tutu famously said: "Don't raise your voice, improve your argument." Nowhere does this advice seem more pertinent than in today's political environment. Graduates leave our program with strong arguments and marketable skills. The goal of the political science faculty is to help students become well-rounded citizens by preparing them to compete in both the employment market and the marketplace of ideas.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

TIMOTHY CASEY (1996), Professor of Political Science; BS, Northern Arizona University; MA, University of San Francisco; PhD, Arizona State University.

WILLIAM FLANIK (2014), Assistant Professor of Political Science; BA, Virginia Commonwealth University; PhD, University of Toronto.

JUSTIN GOLLOB (2008), Associate Professor of Political Science; BS, Idaho State University; MA, PhD, Temple University.

ELIOT JENNINGS (2013), Assistant Professor of Public Administration; BS, MPA, PhD, University of North Texas.

PROCESS SYSTEMS TECHNOLOGY

PROGRAM DESCRIPTION

Associate of Applied Science
Process Systems Technology (INACTIVE)
Technical Certificate
Process Systems Technology - Control Systems Technician Process Systems Technology - Electronics Technician

Program Description
The process systems technology program prepares students for entry-level employment as process operators or technicians. A process operator/technician is a key member of a team of people responsible for planning, analyzing and controlling the production of products from the acquisition of raw materials through the production and distribution of products to customers in a variety of process industries.

This program provides an understanding of process equipment and its principles of operation and control. The graduate will understand the technical aspects of the work, the responsibilities of the work and the importance of safety in this vitally important, shift-oriented position. Industries interested in the graduates from the program include, but are not limited to, oil exploration and production, mining

and mineral processing, petroleum product manufacturing, advanced manufacturing, pharmaceutical production, food and beverage, electric power generation, drinking water treatment and wastewater treatment.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

FACULTY

CAROLYN FERREIRA-LILLO (2009), Assistant Technical Professor of Technology Integration; BSSE, The City College of New York; MS, Stony Brook University.

PSYCHOLOGY

PROGRAM DESCRIPTION
Bachelor of Arts
Psychology
Psychology – Counseling Psychology
Minor
Psychology
Forensic Investigation – Psychology

Program Description
The psychology program provides students with a working knowledge of the methods and findings of modern psychology. Students may pursue the Bachelor of Arts (BA) in Psychology or the BA in Psychology with a concentration in counseling psychology. All majors are required to complete some laboratory coursework in which they conduct psychological science research. Internships are required for counseling students and are available at nearby human service agencies and treatment centers. Students majoring in psychology are prepared to work in a wide variety of settings, including human services (counseling and social work), public affairs, business, sales, criminal justice and (following graduate study) psychotherapy, teaching and research. The psychology program provides a strong foundation for graduate study in psychology and related disciplines.

The psychology program sponsors the Psychology Club and a local chapter of the national honor society in psychology, Psi Chi. Through active membership in these organizations, students are encouraged to become involved in community service and to attend and present their research at regional and national conferences.

A minor in psychology requires the student to acquire working knowledge of the methods and findings of modern psychology. To earn the minor, a student must take the research methods course, along with several topical courses in psychology. A student with this minor will have a deeper understanding of the processes that shape behavior, which can then be applied to a wide variety of areas.

A minor in forensic investigation – psychology provides students a base in forensic psychology. Students may be better prepared to enter graduate programs in forensic psychology. Students will be better prepared to use psychological concepts in criminal justice investigation jobs.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

CRYSTAL BAKER (2016), Instructor of Psychology; BA, Wartburg College; MA, PhD, University of Northern Colorado.

SUSAN BECKER (1996), Professor of Psychology; BA, Reed College; MA, University of Colorado-Colorado Springs; PhD, University of Arizona.

KAREN FORD (1984), Professor of Psychology; BA, Mississippi College; MA, Northeast Louisiana; PhD, University of Mississippi.

JESSICA HERRICK (1995), Professor of Psychology and Department Head of Social and Behavioral Sciences; BA, MS, PhD, University of Wyoming.

CHELSIE HESS (2016), Assistant Professor of Psychology; BA, University of Wyoming; MA, PhD, University of Northern Colorado.

JAKE JONES (2011), Associate Professor of Psychology; BS, Bluefield College; MS, Radford University; PhD, Indiana State University.

KRISTEN N. JONES (2011), Assistant Professor of Psychology; BA, Emory & Henry College; MS, Radford University; PhD, Ball State University.

BRIAN PARRY (2008), Assistant Professor of Psychology; BA, University of Utah; MS, PhD, Brigham Young University.

JENNY PEIL (2011), Assistant Professor of Psychology; BS, Colorado State University; MS, PsyD, Florida Institute of Technology.

PUBLIC ADMINISTRATION/ PUBLIC SAFETY

PROGRAM DESCRIPTION
Bachelor of Applied Science
Public Administration/Public Safety (INACTIVE)

Program Description
The Bachelor of Applied Science (BAS) in Public Administration/Public Safety combines the technical skills required of first responders with the management training necessary for success in areas related to public safety. A unique program, the BAS allows students who have already earned an Associate of Applied Science degree or have completed a federal or state certified training program in law enforcement, fire sciences, emergency medical services or related fields to build on their technical specialties with essential learning courses and junior and senior level management classes. Depending on their previous education, students should be able to complete the BAS degree within four additional full-time semesters.

BAS students will be technically and academically prepared for leadership positions in their chosen fields. This degree will assist students in their upward mobility in their area of employment as they move into supervisory positions.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

PUBLIC HISTORY

(SEE HISTORY)

PUBLIC SAFETY DIVING

PROGRAM DESCRIPTION
Technical Certificate
Public Safety Diving

Program Description
This certificate provides entry-level skills required for public safety diving. Instruction includes basic open water scuba skills, dry suit and full face mask skills, line tending, drowning investigations, operational duties, safety and responsible diving practices. Students gain valuable skills for searching, collecting, preserving and processing underwater crime scene evidence. Students will be required to work in low visibility and potentially high entanglement environments. Career options include positions as investigators, sub-surface crime scene specialists, forensic investigators, police divers, team training officers, safety officers, water operations supervisors and forensic researchers.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

FACULTY

JANE QUIMBY (2012), Director of Public Safety; BS, University of Utah; JD, Denver University.

RADIOLOGIC SCIENCES

PROGRAM DESCRIPTION
Bachelor of Science in Radiologic Sciences
Radiologic Sceinces
Bachelor of Applied Science
Radiologic Technology
Professional Certificate
Computed Tomography
Magnetic Resonance Imaging

Program Description
The Bachelor of Applied Sciences (BAS) in Radiologic Technology offers radiologic technologists with an associate degree opportunity to achieve a baccalaureate degree in four or five full-time semesters (depending upon prior coursework). The program prepares the graduate to seek certification in at least one additional specialty area in radiologic technology. Dual certification in at least one additional specialty area in radiologic technology as well as advanced areas of radiologic technology.

This can lead to greater employment opportunities, increased compensation, and job security. In an online format, students develop skills in advanced specialty areas in radiologic technology, cross sectional anatomy, advanced patient care, informatics, and the business side of health care. The student must procure a clinical site for completion of the cinical portion of the program. Colorado Mesa University and the clinical site must establish and maintain an affiliation agreement during the time the students is completing the clinical portion.

SPECIAL REQUIREMENTS
Students applying to the radiologic technology program must submit additional material. Students applying for admission into the program must be admitted into the general University. Admission to Colorado Mesa University does not guarantee admission into the radiologic technology program, which requires a separate application. Please contact the health sciences department for additional information.

CONTACT INFORMATION
Department of Health Sciences, Health Sciences 101,
970.248.1398.

FACULTY

OLGA GRISIK, RT(R), (CT) (2013), Assistant Professor of Radiologic Technology; AAS, Mesa State College; BS, MS, State University Lvivska Politekhnika.

SCOTT VANGEMEREN (2015), Assistant Professor of Radiologic Technology; BS, University of Kansas; MS, Weber State.

PATTI WARD, RT (R) (1998), Professor of Radiologic Technology; BS, Colorado Christian University; MEd, Lesley University; PhD Colorado State University.

SOCIAL SCIENCE

PROGRAM DESCRIPTION
Associate of Arts
Social Science Emphasis

PROGRAM DESCRIPTION
The Associate of Arts (AA) degree is designed for students who intend to continue their education and obtain a baccalaureate degree. The AA with an emphasis in social science is the appropriate choice for students who will take upper division coursework in the arts, humanities, or social and behavioral sciences. The degree program includes the Colorado Statewide General Education Core and meets the lower division general education requirements at institutions in Colorado. The social science emphasis provides students with the opportunity to develop a broad understanding of the various disciplines which traditionally constitute the social sciences: anthropology, history, political science, sociology, psychology, economics and geography.

CONTACT INFORMATION

Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

SOCIAL WORK

PROGRAM DESCRIPTION
Bachelor of Social Work
Social Work
Minor
Social Work

PROGRAM DESCRIPTION
Social work is a profession dedicated to social and economic justice. Social workers focus primarily on the needs and empowerment of vulnerable, oppressed, at-risk populations, and those living in poverty.

The CMU BSW Program Mission is: "To educate students as generalist social work practitioners who embrace the mission and core values of the social work profession, including issues of diversity, service, the dignity and worth of all people, and social and economic justice."

PROGRAM GOALS
To educate students as generalist social work practitioners; with knowledge and understanding of the ecological perspective, the strengths perspective, the empowerment approach, and solid problem solving and case management skills. To assist students in viewing complex human and social issues from a multi-dimensional, multi-level approach involving micro-, mezzo-, and macro-level interventions. To provide opportunities for the application of the social work mission and core values of service, the dignity and worth of all people, the importance of human relationships, integrity, competency, and social and economic justice. To maintain high professional standards and knowledge of the NASW Code of Ethics. To help students strengthen the relationship between theory and practice by engaging them in various service learning projects, leadership development, strong field education placements, and involvement in the social work club.

Professional social workers are found in every facet of community life—in schools, hospitals, mental health clinics, senior centers, elected office, private practices, prisons, military, corporations, and in numerous public and private agencies that serve individuals and families in need.

SPECIAL REQUIREMENTS
Admission to the University does not guarantee admission to the BSW program; a separate admission application to the BSW program is required, as discussed below.

ADMISSION REQUIREMENTS
Students must apply to get accepted into the Social Work Program. The application packet is completed during the spring semester of a student's sophomore year. The application packet and admissions criteria includes:

- Completion of at least 60 credits of coursework before admission into the program (junior status).
- Maintenance of a minimum overall GPA of 2.0 and a minimum GPA of 2.5 in social work classes.
- Personal statement and essay that includes why you would like to choose social work as a major, extracurricular and volunteer activities, work experience, career goals and interests, and a commitment to the social work mission, core values, and the NASW Code of Ethics.
- Quality of written material (on application, personal statement, and essay).
- Faculty evaluations, as indicated by class attendance, participation, communication skills, and ability to work together with other classmates.
- Student will be notified in writing if they have been accepted into the social work program.
- If accepted into the program, students will be a part of a cohort program that will complete course work together in a sequential format, for their junior and senior years.
- Faculty interview.

* The social work program at CMU does not grant course credit for life experience or previous work experience.

The 15 credit-hour minor in Social Work can be combined with a major in any field. No application process is required for the minor. This minor will help equip students who desire to work in a human services field upon graduation. A minor in Social Work is also beneficial for any student hoping to gain admissions into a master's degree in Social Work (MSW) program.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

MICHELLE SUNKEL (2014), Assistant Professor of Social Work; BS, Lincoln University; MSW, San Diego State University; MBE, Katholieke Universiteit Leuven, Radboud Universiteit Nijmegen, and Universita degli Studi di Padova; DSW, Capella University.

SOCIOLOGY

PROGRAM DESCRIPTION
Bachelor of Arts
Sociology
Minors
Sociology

Program Description
Sociology is the scientific study of social life. It is the exploration of social change and the complexities of the causes – and consequences – of human behavior, focusing on the ways that human behavior is shaped by social factors. Sociologists study a broad range of topics including families, politics, religion, education, race, class, and gender (and much more!). Sociologists ask questions about patterns of human life, and then answer those questions using a variety of theoretical perspectives and research methodologies.

Sociologists frequently contribute to public debate about the causes of social problems and what might be done to help bring about positive social change.

The BA in Sociology exemplifies Colorado Mesa University's liberal arts mission, emphasizing a wide range of skills and content areas. The Sociology program encourages students to develop critical thinking skills, quantitative literacy, and the ability to apply their "sociological imagination" to problems, programs, and policies in the real world. Beyond this, Sociology prepares students for responsible action in the social world and provides a foundation for lifelong learning and civic participation.

The American Sociological Association calls Sociology a "21st Century Major" because it offers the flexibility students will need in a fast-changing and increasingly global labor market. Graduates who choose to go directly into a career can find work in human resources, social services, government, business, the health professions, the criminal justice system, and a wide variety of other industries. Sociology graduates are also very well-prepared for graduate study in Sociology and related disciplines.

CONTACT INFORMATION
Department of Social and Behavioral Sciences;
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

MEGAN HENLEY (2016), Assistant Professor of Sociology; BA, University of Caliornia Irvine; MA, PhD, University of Arizona.

STEPHEN MERINO (2016), Assistant Professor of Sociology; BS, Brigham Young University; MA, PhD, Pennsylvania State University.

BRENDA WILHELM (2000), Professor of Sociology; BA, University of Minnesota; MA, PhD, University of Arizona.

SPANISH

PROGRAM DESCRIPTION
Bachelor of Arts
Spanish – Applied Professional (INACTIVE)
Spanish – Hispanic Studies
Spanish – Secondary Education
Minors
Spanish

Program Description
This program develops skills in speaking and writing Spanish, understanding spoken and written Spanish, and interpreting the cultural characteristics found in Spanish-speaking countries. In addition to our core classes, Spanish majors at CMU are allowed to select from a variety of courses in language, literature, and applied professional Spanish.

Students with interest in professional Spanish strengthen their skills in the professional environment including translation, interpreting, business, and medical and social services. Students may also gain experience through internships in a variety of settings, including the sheriff's department, the county courthouse, various medical offices, and non-profit organizations.

Students may choose from courses where they gain theoretical and applied insights into Spanish language, linguistics, and literature. They examine specific genres (poetry, prose, theatre and film) as well as the periods, regions and movements. The Spanish program exposes students to the study of language variation in the Hispanic world through Phonetics & Phonology and Sociolinguistics.

An optional Spanish Summer Study Abroad Program provides direct exposure to the language and culture of a variety of countries.

Students may also pursue Teaching Spanish at the high school level. Coordinated with the Spanish content courses, the Center for Teacher Education at CMU offers a comprehensive program of study that leads to a secondary teaching licensure in Colorado. Please see the Teacher Education Admission Packet for further information on admissions criteria.

Spanish majors graduate with skills that are highly prized by employers, which enhances the graduates' opportunities especially when combined with other CMU programs such as Law Enforcement, Health Care, Social Work, and Business, among others.

CONTACT INFORMATION
Department of Languages, Literature and Mass Communication, Escalante Hall 237,
970.248.1687.

FACULTY

THOMAS ACKER (1999), Professor of Spanish; BS, Kutztown University; MA, PhD, Temple University.

TYLER ANDERSON (2006), Associate Professor of Spanish; AA, Ricks College; BA, MA, Brigham Young University; PhD, Pennsylvania State University.

BLAKE CROSSLEY (2007), Instructor of Spanish; BA, MA, Brigham Young University.

LUIS SILVA-VILLAR (2000), Professor of Spanish; MA, Real Conservatorio Superior De Musica de Madrid; MA, PhD, University of California - Los Angeles.

MAYELA VALLEJOS-RAMIREZ (2003), Professor of Spanish; BA, Universidad de Costa Rica; MA, West Virginia University; PhD, University of Nebraska.

SPEECH

PROGRAM DESCRIPTION
Minor
Speech

Program Description
The speech minor offers a broad range of courses focusing on human communication behaviors and is designed

to complement any major. In a survey of 480 companies and public organizations, communication skills ranked first among the personal qualities of college graduates sought by employers. The coursework is designed to improve oral message sending and relational communication skills. You will study presentation skills, conflict resolution, leadership and nonverbal and intercultural communication, important skills in our global society.

CONTACT INFORMATION
Department of Theatre and Arts,
Moss Performing Arts Center 141,
970.248.1233.

FACULTY

NICOLE GRIDER (2016), Instructor of Speech; BS, MA, University of Central Missouri.

PAULA CASEY (1998), Instructor of Speech; BS, MA, Northern Arizona University.

HOLY BUGLEWICZ (2016), Instructor of Speech; BS, BA, MA, University of Nebraska.

SPORT MANAGEMENT

PROGRAM DESCRIPTION
Bachelor of Science
Sport Management
Associate of Science
Sport Management Emphasis
Minor
Sport Management

Program Description
The Bachelor of Science in Sport Management prepares students to enter the world of sport business or pursue a graduate degree. The sport management degree provides an overview of the history and role of sport in society and covers topics such as leadership and ethics, governance and communication and legal considerations in sport operations. Students will also obtain business administration skills through courses in accounting, marketing, economics and business information technology.

The Associate of Science in Sport Management is designed for students who intend to continue their education and obtain a baccalaureate degree. The degree program includes the Colorado Statewide General Education Core and meets the lower-division general education requirements at most public institutions in Colorado. Graduates of this program may obtain entry-level positions in sport management or continue to pursue their bachelor-level education to obtain eventual higher-level positions related to sport management, business, or kinesiology.

Opportunities for college graduates with sport management education and experience are very diverse and challenging. As sport has evolved into an integral part of the American culture, the operations of sports programs have become more sophisticated and complex. With an understanding of the intricacies of sport activities and knowledge of effective business practices, graduates will be prepared to oversee sport programs and facilities. Sport management positions are found in a variety of settings including schools, colleges and universities, public and private agencies, government and the military.

The minor in sport management provides a strong platform for students to combine their interests in business with the business of sports. Students will explore subject areas which include: principles of management, organization/administration/legal considerations, marketing, governance and communication, sport law and risk management, leadership and ethics. This minor could complement business or mass communications majors.

CONTACT INFORMATION
Department of Kinesiology, Maverick Center 237B,
970.248.1635.

FACULTY

RICHARD BELL (2005), Instructor of Kinesiology; BS, Clemson University; MA, The Citadel; JD, University of South Carolina; EdD, United States Sports Academy.

JEREMY HAWKINS (2013), Associate Professor of Kinesiology and Department Head of Kinesiology; BS, Brigham Young University; MS, Oregon State University; PhD, Brigham Young University.

STEVEN ROSS MURRAY (1998), Professor of Kinesiology; BS, University of North Alabama; MS, DA, Middle Tennessee State University.

ELIZABETH SHARP (2011), Associate Professor of Kinesiology; BS, MEd, Arkansas Tech University; PhD, Middle Tennessee State University.

STATISTICS

(SEE MATHEMATICS)

STUDIO ART

(SEE ART)

SUPERVISION

(SEE BUSINESS)

SURGICAL TECHNOLOGY

PROGRAM DESCRIPTION
Associate of Applied Sciences
Surgical Technology

PROGRAM DESCRIPTION
This program prepares the student to work in surgical operations areas under the supervision of surgeons, registered nurses, or other surgical personnel. They may help set up operating rooms, prepare and transport patients for surgery,

adjust lights and equipment, pass instruments and other supplies to surgeons and surgeon's assistants, hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments.

The program requires both classroom time and clinical time as described in the course syllabi. Clinical placements will be at surgical site affiliations in western Colorado. The goal of the program is to prepare competent entry-level surgical technologists in the cognitive (thinking), psychomotor (skills), and affective (behavior) learning domains.

See Nursing section for admission process.

CONTACT INFORMATION
Department of Health Sciences, Maverick Center 170,
970-248-1398

SUSTAINABILITY PRACTICES

PROGRAM DESCRIPTION
Professional Certificate
Sustainability Practices

PROGRAM DESCRIPTION
"Sustainability" is a way of living that meets the needs of the present without compromising the ability of future generations to meet their own needs. In order to achieve sustainability, we must examine our approach to energy, food, shelter, transportation and other aspects of everyday life. Can we continue our current approach indefinitely? What changes need to occur to make our approach sustainable? What can we do to make those changes?

Through the certificate in sustainability practices, students learn the principles of sustainability along with specific ways to implement them. Anyone seeking to understand and practice this approach will benefit from completion of the program. For some, the program can serve as a first step toward a more in-depth knowledge that may lead to a career. This certificate could help professionals to distinguish their business practices, community leaders to better understand future trends in community planning and any student, educator or citizen to make a positive difference in the environment.

CONTACT INFORMATION
Department of Physical and Environmental Sciences, Wubben Science 232,
970.248.1993.

SUSTAINABLE AGRICULTURE

PROGRAM DESCRIPTION
Associate of Applied Science
Sustainable Agriculture

PROGRAM DESCRIPTION
Sustainable agriculture is a holistic approach, which is integrated throughout each course, addressing how to enhance environmental quality of food production while also taking into account the economic viability of farm and ranch operations. Sustainable agriculture is the practice of farming using principles of ecology, the study of relationships between organisms and their environment. It has been defined as "an integrated system of plant and animal production practices having a site-specific application that will last over the long term.

In this Associate of Applied Science degree, the student will have a detailed understanding about the food, fiber, and natural resource systems of western region agriculture; learn through leadership and service to serve all people and groups equally and without discrimination within the workplace, amplify and expand the "whole person" concept of education, including leadership, personal, and interpersonal skills. Students will develop an understanding of marketing and economics that continually and systematically responds to the marketplace; be exposed to the concepts that foster the spirit of free enterprise and develop creative entrepreneurship and innovation. Through an integrated approach, students will learn the concepts of Sustainable Agriculture through classroom and laboratory instruction, supervised experiences, and student organizations.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

TEACHER EDUCATION

SEE EDUCATION

THEATRE ARTS

PROGRAM DESCRIPTION
Bachelor of Arts
Theatre Arts – Design/Technology
Theatre Arts – General Theatre
Bachelor of Fine Arts
Theatre Arts – Acting/Directing
Theatre Arts – Music Theatre
Minors
Theatre

Program Description

The theatre program is constructed to help students meet the rigorous demands of a professional career in theatre and to provide a strong artistic foundation and practical experience. Beginning with the first semester, students enroll in courses taught by academically and professionally experienced faculty.

The acting/directing concentration is designed to give students a depth and breadth of acting skills and beginning directing skills including voice, movement, period styles and Shakespeare. Acting opportunities in all of the department's productions are open to motivated and talented first-year students. Students are involved in numerous shows and this production work allows for a controlled, supervised experience.

The music theatre concentration represents one of the most unique programs offered in Colorado, stressing strong technical foundations in music, theatre and dance. This approach creates "triple threats" and enhances a young performer's potential for a career in musical theatre. To complement technique courses, students also participate in a wide variety of performance-related assignments.

The design/technology theatre concentration exposes students to multiple areas of the visual and technical aspects of theatre, including costume design, scenography, lighting design and theatre technology. The first year centers on courses that develop aesthetic sensitivity and technical proficiency. Subsequent years are devoted to specialized studio work in the student's chosen area of concentration. This foundation is supported by a series of skill related courses in drafting, drawing and rendering techniques, model making, projection aesthetics, lighting console operation and computer-aided design. Costume skills courses include costume construction and fitting, fabric painting and fabric dyeing.

Through the theatre minor, students may choose courses from a broad range of theatrical endeavors including: acting, scenery, costumes, theatre history, the teaching of theatre, arts management and dramatic literature. Students will also have the opportunity to gain hands-on experience in the creation of two mainstage shows during the CMU theatre season. Training afforded by the study of theatre is also attractive to many other professions, including teaching, human resources, the ministry and law.

SPECIAL REQUIREMENTS

Students seeking admission as theatre majors must successfully audition for acceptance into the acting/directing and music theatre concentrations. Admission to the University does not guarantee admission into one of these programs. Prospective theatre majors should consult the department's website or contact the department directly for information regarding audition dates and requirements. Prospective students interested in departmental scholarships must audition no later than April 15 of the year they seek admission.

Musical Theatre students deficient in piano skills will be required to complete MUSA 130, Class Piano I and MUSA 131, Class Piano II as lower division elective courses.

CONTACT INFORMATION

Department of Theatre Arts,
Moss Performing Arts Center 141,
970.248.1233.

FACULTY

KRISTOPHER DIETRICH (2015), Assistant Professor of Music Theatre; BA, University of Lethbridge; MFA, University of Missouri-Kansas City.

JEREMY FRANKLIN (2007), Instructor of Music Theatre; BA, Ouachita Baptist University.

JEANINE HOWE (2006), Associate Professor of Theatre; BFA, Otterbein College; MFA, Carnegie-Mellon University.

MAURICE LAMEE (2012), Assistant Professor of Theatre and Department Head of Theatre Arts; BA, Loretto Heights College; MFA, National Theatre Conservatory.

MICHAEL LEGATE (2014), Instructor of Theatre and Technical Director; BFA, University of Montana; MFA, University of Nebraska-Lincoln.

TIMOTHY PINNOW (2010), Professor of Theatre and Acting Assistant Vice President for Academic Affairs; BA, Luther College; MFA, University of Florida.

JILL VANBRUSSEL (2014), Assistant Professor of Theatre; BS, University of California–Santa Barbara; MA, Bowling Green State University; MFA, Purdue University.

TRANSPORTATION SERVICES

PROGRAM DESCRIPTION

Associate of Applied Science
- Transportation Services – Advanced Automotive Service Technician
- Transportation Services – Diesel Technology

Technical Certificate
- Transportation Services – Light-Duty Automotive Technician
- Transportation Services – Light-Duty Automotive Technician Foundations I
- Transportation Services – Light-Duty Automotive Technician Foundations II
- Transportation Services – Automotive Service Technician
- Transportation Services – Diesel Mechanics

Program Description

The transportation services program covers the theory and fundamentals of operation, troubleshooting, diagnostic testing and repair of: drive trains, gas and diesel engines, hydraulic and air brakes, alignment, suspension and steering, climate control, electronic body and chassis controls, engine performance and emission systems, charging and starting systems, hybrid drive systems, and hydraulic and pneumatic systems; safety; technical mathematics; oral and written communication; and leadership skills. The student may choose one of two certificate and/or an Associate of Applied Science automotive degree; and a certificate and/or Associate of Applied Science degree in diesel technology. The emphasis of the programs is the repair of late model vehicles, with the emphasis on the computer controls.

The program is accredited by NATEF, National Automotive Technicians Education Foundation, as a Master Automotive Service Technician program. The courses prepare the student to take the ASE, Automotive Service Excellence, certification examinations offered by ASE, and administered at CMU quarterly.

By successfully completing a technical certificate or an Associate of Applied Science in Transportation Services, students will be prepared for careers as automotive/diesel technicians, parts and service distributors, industrial sales representatives, service managers and business owners in the transportation services industry.

SPECIAL REQUIREMENTS
Excellent dexterity, eye-hand coordination, and critical thinking is a plus for a technician. Proper selection, care and safe use of power, hand and diagnostic tools, and equipment is emphasized.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

FACULTY
JASON ROBERSON (2017), Assistant Technical Professor of Transportation Services; AAS, BS, Colorado Mesa University.

VISUAL COMMUNICATIONS

PROGRAM DESCRIPTION
Associate of Applied Science
Visual Communications – 3D Animation Technology Emphasis
Technical Certificate
Visual Communications – 3D Animation Technology

Program Description
The Animation Technology coursework prepares students to work in digital 3-D animation modeling environments. 3D Digital Animation is all about the art of visual storytelling. Animation technology combines traditional artistic skills such as drawing, design and sculpture, with video, lighting and special effects training. This program covers the in-depth fundamentals of classical animation based on the 12 principles of animation, as well as character development and rigging. Students gain experience using industry standard software such as 3DS Max, Photoshop, Illustrator and After Effects to produce animations and portfolios. Students will gain expertise in object modeling and computer generated animation techniques to produce complex 3-D animation projects, as well as study life drawing, layout and design, computer illustration, storytelling and storyboarding. Graduates of this program will be prepared for entry-level jobs in the fields of movie animation, gaming animation and animation for commercials and presentations.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102, 2508 Blichmann Avenue, 970.255.2670.

FACULTY
DANIEL MCCLINTOCK (2007), Technical Instructor of Media Technology; BA, Mesa State College.

VITICULTURE AND ENOLOGY

PROGRAM DESCRIPTION
Associate of Applied Science
Viticulture and Enology
Technical Certificate
Viticulture and Enology - Viticulture
Viticulture and Enology - Wine Professional
Viticulture and Enology - Enology

Program Description
The Viticulture and Enology curriculum is designed to provide the entrepreneurial and technical skills necessary to manage a profitable, environmentally sound, vineyard and/or winemaking business. Students learn the fundamentals of sustainable viticulture, focusing on cultivars that are suitable for Colorado, as well as the science of fermentation, and the fundamentals of producing and testing wine. Emphasis is placed on entrepreneurial and practical field training. As part of their education, students will participate in the establishment and management of a vineyard, and the production of wine. Graduates are qualified for employment in a variety of positions associated with viticulture and winemaking businesses.

This program will provide the student with an understanding of the viticulture and enology industry, the principles and science underlying operation and control decisions, and financial practices and measures common to the businesses. The graduate will understand the technical aspects of the work, the responsibilities of the work and the importance of safety in this vitally important career.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

FACULTY
JENNE BALDWIN-EATON (2016), Technical Instructor of Viticulture and Enology; BS, Chico State University.

WATER QUALITY MANAGEMENT

PROGRAM DESCRIPTION
Associate of Applied Science
Water Quality Management
Technical Certificate
Water Distribution and Collection
Water Ditribution and Treatment
Wastewater Collection and Treatment
Small Systems
Mathematics in Water Treatment
Introduction to Wastewater Treatment
Advanced Water Treatment
Advanced Wastewater Treatment

Program Description
Begin a new career managing the processes that improve water quality. The Water Quality Management program prepares students for entry-level employment as technicians in the water processing industry. Water quality technicians work in teams to operate drinking water treatment systems and wastewater treatment systems. The workers plan, test for quality, and operate complex equipment to acquire and deliver high quality drinking water or process wastewater for return to the environment.

This program will provide the student with an understanding of the regulatory expectations, the science involved in meeting regulatory expectations, the equipment used to process water, and the systems management skills necessary to be a successful employee in the water processing industry.

Program Strengths
- Provides students with an understanding of the science involved in meeting regulatory expectations
- Instruction on the equipment used to process water
- Curriculum emphasizes the necessary systems management skills
- Provide students necessary information to pass state examination for Class D license.

Career Opportunities
- Occupational Health and Safety Specialist
- Water Treatment Plant Technician
- Wastewater Treatment Plant Technician
- Water Resource Speicialist
- Chemical Technicians

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

WATERSHED SCIENCE

PROGRAM DESCRIPTION
Minor
Watershed Science

Program Description
The Watershed Science minor is an interdisciplinary program designed to serve the regional need for scientists with a strong background in water-related issues. It is a useful complement to environmental, physical and biological science majors, providing students in these fields with certification of focused coursework. Combined with the relevant bachelor of science degree, plus additional calculus and physics courses, the minor satisfies the federal government's requirements for qualification as a hydrologist. The proximity of Colorado Mesa University to the Colorado, Gunnison and Green Rivers, the drainages of the Colorado National Monument and the high arroyos create an ideal location for the study of Watershed Science.

CONTACT INFORMATION
Department of Physical and Environmental Sciences,
Wubben Science 232,
970.248.1993.

WILDLAND FIRE MANAGEMENT

PROGRAM DESCRIPTION
Associates of Applied Science
Wildland Fire Management

Program Description
The Associate of Applied Science (AAS) in Wildland Fire Management program covers the fundamentals of basic wildland firefighting and management, fire operations in the wildland/urban interface, and wildland fire cause and origin. The program prepares students for entry level positions in the wildland firefighting profession, and is designed to provide students who are interested in careers in emergency and natural resource management with the knowledge, communication, and critical thinking skills necessary for success in the field. Subjects covered are varied and include meteorology, aviation, physics of combustion, ignition methods and devices, and organizational management related to wildland fire emergency services.

Students successfully completing the program are eligible for industry certification. The wildland fire courses presented meet National Wildfire Coordination Group (NWCG) standards and are accepted by Federal, state, and local agencies with wildland fire management jurisdictions. Students with this AAS in Wildland Fire Management combined with industry certification will be highly competitive for employment and future promotional opportunities in the field.

SPECIAL REQUIREMENTS
Wildland Fire operations are rigorous in nature and some of the field training is arduous in order to simulate actual fire scene environments. Students are responsible for providing their own boots and gloves that meet NWCG requirements for personal protective equipment.

CONTACT INFORMATION
Office of Student Services, WCCC, Bishop B102,
2508 Blichmann Avenue, 970.255.2670.

FACULTY

JANE QUIMBY (2012), Director of Public Safety; BS, University of Utah; JD, University of Denver.

ALISON ROBB (2015), Technical Instructor of Wildland Fire Management; BS, BA, University of Montana.

WOMEN'S AND GENDER STUDIES

PROGRAM DESCRIPTION
Minor
Women's and Gender Studies

Program Description
The Women's and Gender Studies minor recognizes the centrality of gender to a variety of disciplines, professions and personal experiences and world views. Students will take coursework in disciplines such as Criminal Justice, History, Literature, Psychology, and Sociology with an aim toward developing an interdisciplinary understanding of issues related to women and gender in both contemporary and historical contexts.

By augmenting students' chosen majors, the Women's and Gender Studies minor prepares students looking for strong interdisciplinary perspectives along their path to careers and/or further studies in social work, counseling, law, education, business, and the arts, among others.

CONTACT INFORMATION
Department of Social and Behavioral Sciences,
Lowell Heiny Hall 413,
970.248.1696.

FACULTY

JENNIFER HANCOCK (2010), Assistant Professor of English; BA, Oklahoma State University; MFA, Sarah Lawrence College; PhD; Oklahoma State University.

ERIKA JACKSON (2010), Associate Professor of History; BA, Michigan State University; MA, Loyola University; PhD, Michigan State University.

BRENDA WILHELM (2000), Professor of Sociology; BA, University of Minnesota; MA, PhD, University of Arizona.

Center for Teacher Education (Licensure)

Contact: Center for Teacher Education, Colorado Mesa University, Dominguez Hall, Suite 109, 970.248.1786

The Center for Teacher Education offers licensure programs in Elementary, Secondary, K-12, Early Childhood, and a Master of Arts in Education. Licensure to teach in public schools in the State of Colorado requires each teacher candidate to complete a degree including a sequence of professional education courses that include extensive field experience in classrooms. Teaching licensure coursework and field experiences are completed through the Center for Teacher Education, while the content degree coursework is completed through the academic department of the discipline area, with both departments coordinating to assist teacher candidates in completing the program. Formal admission to the Center for Teacher Education is required of all students expecting to obtain a Colorado Educator License in any teaching field.

In order to complete all licensure requirements in a timely manner it is important that students contact the Center as soon as possible after enrolling at Colorado Mesa University. For information on the MA program, see the Graduate Programs section.

Elementary Education Licensure – Undergraduate

(Colorado Teacher Licensure and Elementary Education Endorsement, Grades K through 6.)

Students should meet with a Center for Teacher Education advisor as soon as possible in order to obtain information specific to the elementary education licensure program. The components of the Colorado Mesa University elementary licensure program are as follows:

1. Academic Major: All elementary licensure students must complete the requirements for a Bachelor of Arts in Liberal Arts (Interdisciplinary Studies).
2. Admission: Formal admission to the Center for Teacher Education.
3. Professional Education Sequence for Elementary Teacher Licensure: Coursework must be taken in the prescribed sequence; see table.

Elementary Licensure Courses		Credit Hours	Field Hours
EDUC 115*:	What it Means to be an Educator	1	8
EDUC 215*:	Teaching as a Profession	1	12
EDUC 341:	Pedagogy and Assessment - Elementary	3	20
EDUC 343:	Teaching to Diversity	3	20
EDUC 374:	Exceptional and ELL	3	
EDUC 378:	Technology for K-12 Educators	1	
EDUC 440:	Methods of Teaching Language and Literacy: Early Childhood	3	40
EDUC 441:	Methods of Teaching Language and Literacy: Elementary	3	80
EDUC 451:	Methods of Teaching Mathematics	3	60
EDUC 461:	Methods of Teaching Science & Social Studies	3	
EDUC 471:	Educational Assessment	1	
EDUC 475:	Classroom Management	1	
EDUC 499C:	Teaching Internship and Colloquia	12	600
Total Hours Required		**38**	**840**

*Must be taken before formal acceptance into CTE

Secondary Education Licensure – Undergraduate

(Colorado Teacher Licensure and Secondary Education Endorsement, Grades 7 through 12)

Students should meet with a Center for Teacher Education advisor as soon as possible in order to obtain information specific to the secondary education licensure program. The following are components of the Colorado Mesa University secondary licensure program:

1. Academic Major: All secondary licensure students must complete the requirements for a Bachelor of Arts or Science in one of the following academic disciplines: Biology, English, History, Mathematics, Physical Science (Geology), or Spanish.
2. Admission: Formal admission to the Center for Teacher Education.
3. Professional Education Sequence for Secondary Teacher Licensure: Coursework must be taken in the prescribed sequence; see table.

Secondary Licensure Courses		Credit Hours	Field Hours
EDUC 115*:	What it Means to be an Educator	1	8
EDUC 215*:	Teaching as a Profession	1	12
EDUC 342:	Pedagogy and Assessment - Secondary	3	20
EDUC 343:	Teaching to Diversity	3	20
EDUC 442:	Integrating Literacy Across the Curriculum - Secondary and K-12 Art	3	60
EDUC 475:	Classroom Management	1	
EDUC 497:	Content Methodology Practicum	3	80
EDUC 497a-e:	Methods of Teaching Secondary Discipline	2	
EDUC 499g:	Teaching Internship and Colloquia	12	600
Total Hours Required		**29**	**800**

*Must be taken before formal acceptance into CTE

K-12 Education Licensure – Undergraduate

(Colorado Teacher Licensure and K-12 Endorsement, Kindergarten through 12th Grade for endorsement in Art, Music or Kinesiology)

Students should meet with a Center for Teacher Education advisor as soon as possible in order to obtain information specific to the K-12 Education licensure program. Following are the components of the Colorado Mesa University K-12 teacher licensure program.

1. Academic Major: K-12 licensure students must complete the requirements for the Bachelor of Arts in Kinesiology or Music, a Bachelor of Fine Arts in Art, or a Bachelor of Music Education.
2. Admission: Formal admission to the Center for Teacher Education.
3. Professional Education Sequence for K-12 Teacher Licensure**: Coursework must be taken in the prescribed sequence; see table.

** Students seeking licensure in art must take EDUC 442 and 475 in addition to the sequence below. Students seeking licensure in music are not required to take EDUC 342.

K-12 Licensure Courses Art, Music, Kinesiology		Credit Hours	Field Hours
EDUC 115*:	What it Means to be an Educator	1	8
EDUC 215*:	Teaching as a Profession	1	12
EDUC 342:	Pedagogy and Assessment - Secondary and K-12 (ART & KINE)	3	20
EDUC 343:	Teaching to Diversity	3	20
Content Area Methods Courses		Varies	140
EDUC 499d:	Teaching Internship and Colloquia - Elementary	6	300
EDUC 499h:	Teaching Internship and Colloquia - Secondary	6	300
Total Hours Required		**Varies**	**800**

*Must be taken before formal acceptance into CTE

All teacher licensure programs require taking the PRAXIS II professional licensure exams prior to beginning the student teaching semester.

Master of Arts in Education

A graduate option for earning initial teacher licensure is available. See Graduate Programs for details.

University-wide Academic Offerings

Academic Honors Programs

Contact Information
Appropriate Academic Department Head for the major

Program Description
As member of the National Collegiate Honors Council, Colorado Mesa University's Honors Programs offer highly-motivated undergraduates enriched studies in their academic major. Based within each academic department, completion of honors requirements varies by academic program, but each includes opportunities for students to actively engage in more advanced study through coursework and a capstone project that can include research or creative work presented in a scholarly venue. Students completing a program's academic honors requirements are recognized at CMU's Commencement Ceremony.

At a minimum, students seeking participation in an Academic Honors Program must have earned at least 45 semester credit hours with a minimum 3.5 grade point average (GPA) at the time of application; academic programs may have additional admissions criteria. An application process occurs each spring semester, and interested students should contact the Academic Department Head for the application deadline. In addition to the credit hour and GPA qualifications, an applicant also should submit:

1. the application form; and
2. a summary of no more than one, single-spaced page that
   a. details the applicant's scholarly background, community and/or University service, and academic awards; and
   b. describes briefly why s/he is applying for an academic honors program of study.

Admission to the Academic Honors Programs is competitive. Applications will be reviewed by faculty members in the appropriate program/department, and students will be notified on their acceptance status within the timeframe indicated in the program-specific information.

Freshman Year Initiative (FYI) Program

Contact Information
Admissions Office, Welcome Center
970.248.1817 -or-
Academic Affairs Office, LHH 209,
970.248.1881

Program Description
Colorado Mesa University offers first-year freshmen an opportunity to participate in a program designed specifically to enhance their first-year experience and ease the transition from high school to college. This program, Freshman Year Initiative (FYI), is offered to new freshmen prior to the start of each fall semester. For more information visit coloradmesa.edu/fyi. The University's academic success course, UNIV 101, First Year College Success is the primary focus of the FYI Program. UNIV 101 is a two-credit elective course designed to introduce students to the resources of the University and to enhance their study skills in order to be better prepared for the expectations of college-level work. UNIV 101 is also offered during the fall and spring semesters.

Maverick Provisional Program (MVP)

Contact Information
Admissions Office, Welcome Center
970.248.1817 or
Office of Student Success, Albers Hall
970.248.1340

Program Description
Colorado Mesa University offers first-year Provisional Baccalaureate (PB) freshman an opportunity to participate in a program designed specifically to assist students in making a successful transition to college by learning strategies and skills they will need to successfully navigate their first semester. This program, Maverick Provisional Program (MVP), is offered to new PB freshmen prior to the start of each fall semester. For more information, visit coloradomesa.edu/mvp.

The MVP program includes completion of the UNIV 100 (College Success Skills) course. This is a one-credit course designed to help PB students successfully transition to college life by introducing them to campus resources and teaching them study skills that will aid them in their transition. UNIV 100 is also offered during the fall and spring semesters.

International Student Exchange Programs (ISEP)

Contact Information
Director of International Student Admissions & Programs
Annie Gingerich
Rotary Hall
970.248.1802

Program Description
The International Student Exchange Program is a network of over 150 colleges and universities in 52 countries cooperating to provide university-level reciprocal exchanges. ISEP is dedicated to offering access to international education opportunities for a diverse student population. ISEP's reciprocal exchange program allows students to pay Colorado Mesa University tuition, housing and fees, which are often much more affordable than those of the host university. Direct enrollment options are also available. ISEP students are fully immersed in an intercultural experience at their host institution and are able to explore the global opportunities of their chosen academic field. See page 34 and isep.org for more information.

Undergraduate Developmental Courses

Contact Information
WCCC Office of Developmental Instruction,
Bishop B185, 970.255.2613

Program Description
In order to maximize student success, Colorado Mesa University provides placement testing and college prep courses so that students can be assured they are prepared to do the college-level work in their course of study. Students enroll in college prep courses in mathematics and English. Preparatory courses are below the 100 level and include MATC 090 and 091, and ENGC 090. In addition, studios (ENGC 092 or READ 092) are available depending on placement level for extra support in ENGL 111 or ENGC 090. These courses are designed for students needing to strengthen their skills before entering college-level classes or to provide extra support while taking entry level classes. Research indicates that students who need and take these courses do better in their college-level courses than they would have without them. They are not intended for transfer purposes, and will not fulfill degree requirements. Students are encouraged to consult with their advisors about the need to register into these classes.

FACULTY

ALAA KASSIR (2008), Associate Technical Professor of Developmental Education; BS, MS, University of Wisconsin-Madison

DAVID MILLER (2014), Technical Instructor of Developmental Education; BS, Colorado Mesa University

CHRISTINE MURPHY (2014), Director of Developmental Education; BA, Regis University; MS, Capella University

Graduate Programs

General Admissions Policies & Procedures

Admission Criteria
Faculty in each degree program establish admission standards for the graduate programs, which may exceed the minimum standards set by Colorado Mesa University's Graduate Studies Advisory Committee. Applicants should consult the academic department head or faculty in the program(s) of interest for any additional admission requirements. Each academic department that offers a graduate program shall utilize the same minimum criteria for admission to the program.

Students wishing to take graduate courses not associated with a graduate program must still gain admission to CMU as a non-degree seeking graduate student. Each applicant must possess a baccalaureate degree from an accredited college or university, or equivalent certification. Faculty can make recommendations for admission of non-degree seeking students who do not meet the criteria to the Assistant Vice President for Academic Affairs.

An individual without a baccalaureate degree may be admitted to a master's degree program only if he or she is admitted to a combined program at CMU, such as the MBA 3+2 program.

Admission Procedures
To begin a graduate program at CMU, a student must possess a baccalaureate degree from an accredited institution. The following items must be submitted to the Admissions Office online:

1. A completed Application for Admission to Graduate Programs and a $50 application fee. The fee is non-refundable and is not applicable toward tuition. The application form may be found on the Graduate Studies webpage.
2. Official transcripts of all college and university work must be sent directly to the Admissions Office by each institution attended. Transcripts received directly from students cannot be accepted except for advising purposes. The transcripts of students who previously attended CMU may be obtained from the Registrar's Office and do not require a student request.
3. Test scores, if required by the program, from either the Educational Testing Services for the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT), or from the Psychological Corporation for the Miller Analogies Test (MAT) must be provided, if required. Students must request the scores be sent to the Admissions Office. See the specific degree program for required examinations.
4. Academic departments offering graduate programs may admit a student based upon supplemental/alternate criteria that have been established by the major department. If someone is recommended for admission

who does not meet the graduate program standards, a rationale must be provided stating the factors which were considered in recommending the student: GPA in the discipline; letters of recommendation; samples of the student's work; GRE, MAT or GMAT scores; or other compelling factors. The Assistant Vice President for Academic Affairs/Director of Graduate Studies shall review all recommendations for admission below the standard.

Applicants should check with individual programs regarding specific application and admission deadlines. After the program faculty make a final decision on admission, the student will be notified of the outcome.

Admission Expiration
Admission to any graduate program shall remain valid for one semester, excluding summer terms, following notification of acceptance. If a student does not begin coursework during this period, the student shall be required to submit a new application with the appropriate processing fee and satisfy all admission requirements.

Conditional Admission
Conditional admission refers to applicants admitted pending the receipt of application requirements specified by either the Admissions Office and/or the academic department. Applicants for admission may be accepted into a graduate program or with the provision that they complete deficiencies as noted in and by the dates specified in their acceptance letter. No student shall be permitted to register for an additional semester or receive financial aid unless the specified requirements are met during the first semester of the student's program.

International Student Admission
To be considered for admission, a prospective international graduate student who has or will be seeking an F-1 student visa, must apply for admission with the graduate program in addition to the Office of International Student Admissions and Programs. International applicants must satisfy all requirements for admission that apply to U.S. citizens, as set forth above. In addition, international applicants are required to:

- Provide a professional transcript evaluation of all courses taken and degrees earned at a college/university outside the United States. Please see coloradomesa.edu/international for more information on approved foreign transcript evaluation options.
- An international student may be required to submit a TOEFL test average score of 80 (internet-based) or 550 (paper-based). Contact the Office of International Student Admissions and Programs for more information.
- Complete and have notarized the CMU Statement of Financial Support and submit this form along with official bank statement(s), demonstrating proof of sufficient financial resources. Costs and forms may be obtained from coloradomesa.edu/international.
- For registration purposes, all international students are required to maintain health insurance. Students who do not already have coverage will be enrolled in CMU's international student group insurance plan;
- For registration purposes, all international students are required to comply with the Colorado law regarding the measles, mumps and rubella immunizations. A Colorado Mesa University official immunization form must be completed and returned to the Registrar's Office.

International students on an F-1 or J-1 visa are required to register for a full-time course load as determined by the academic department.

Enrollment Prior to Admission
Students who have applied for admission to a graduate program at CMU are not permitted to enroll for more than nine credit hours in that graduate program as a non-degree seeking student. A hold shall be placed on the student's registration, and the student cannot continue to enroll until an admission decision has been reached. A student's application must be complete, and the program faculty must recommend either a regular admission or must deny admission by the end of the first semester, or nine semester hours, whichever is later.

Financial Aid
Students should consult the Financial Aid Office for eligibility requirements of undergraduate & graduate certificates.

Admission Appeals
An applicant who has been denied admission to a graduate program or who has received Conditional Admission may request reconsideration by writing to the Graduate Program Department Head within 30 days of the date of denial or notification of conditional admission status. Requests should include the reasons for requesting reconsideration, along with supporting materials and information that was not submitted with the original application. The Department Head will consult with the program faculty to resolve the appeal. The Department Head will act as final authority on the appeal process.

Academic Advisor
Each student shall be assigned an academic advisor upon acceptance into a graduate program by the appropriate department. The chief responsibility of the academic advisor is the planning and overseeing of the student's academic plan. The academic advisor also is responsible for assisting students with questions regarding their academic programs such as expectations for comprehensive examinations, thesis, and/or practicum as well as professional advising and guidance for academic and professional endeavors. Any advisor-approved deviations from published program requirements or degree plans must be approved by the Academic Department Head and the Assistant Vice President for Academic Affairs/Director of Graduate Studies. This must be submitted in writing by the student, drafted in conjunction with the academic advisor.

Note: The importance of the academic advisor cannot be overstated. Advisement includes all aspects of students' present and future academic and professional planning. It is often the academic advisor who is able to help students conceptualize their academic program within the context of their own professional goals and aspirations.

Degree Plan
After acceptance into a graduate program, each student shall meet with his or her academic advisor and determine a degree plan that, when completed, shall lead to the attainment of the graduate degree. The degree plan shall be constructed before the student completes one semester or nine credit hours of coursework. This degree plan should follow the guidelines of CMU and the department. The respective degree plan shall list all courses, including those needed for any remediation and/or weaknesses deemed by the academic advisor, and practicum, thesis, and research requirements necessary to complete the specific degree. The degree plan shall have the signature of the student, the academic advisor, and the department head. Upon completion of the degree plan and all requirements, and upon the recommendation of the Faculty, the student shall be awarded the respective graduate degree.

Note: An addendum can be submitted to the degree plan provided the signatures of the student, the academic advisor, the department head, and the Assistant Vice President for Academic Affairs/Director of Graduate Studies are secured approving the changes.

Transfer Credit
Students can transfer up to nine credit hours for a Master's degree and up to 18 credit hours for a Doctoral degree from another accredited institution into their degree plan for a graduate degree provided they meet the general transfer policies of CMU and are approved by the academic advisor and the department head.

- Transfer work is not used in the calculation of the graduate GPA.
- Transfer credit shall not be accepted if the work was used to obtain a degree or is included as part of another degree at any institution.
- Transfer work must be approved by the department and must be "A" or "B" work.
- Transfer credit cannot be used to meet any residency requirement.
- Transfer credit cannot be used to make up "C," "D," "F," or "U" grades received in required courses.
- Only courses graded by "letter" grades are transferable. Courses graded "S/U" or "P/F" are not transferable.
- All program requirements, including transfer work, must be completed within the time limits of the degree program. (See the section on Program Time Limits.)
- Transfer courses must be numbered as graduate level according to the course numbering system at the originating institution.
- Transfer courses must be from accredited institutions of higher education that offer equivalent level degrees.
- Graduate internship credit transferred from another institution will be considered for transfer credit. Requirements may vary by academic departments.
- Thesis credit, or credit for a master's project, does not receive transfer credit unless the thesis or research project is collaborative or joint effort between CMU and another accredited institution offering graduate programs and degrees.
- Students wishing to take one or more courses at another institution for graduate credit after beginning their graduate program of study at CMU must first consult their program graduate advisor. Permission may be granted following the procedure for transferring the credits earned at other institution as described above.
- Non-credit courses, including lifetime learning seminars and programs, or courses taken for continuing education will not receive transfer credit.

Students who wish to transfer credit must provide the Registrar's Office with complete documentation showing the course(s) to be transferred. The student then must present the complete transcript to the program advisor for approval or disapproval. Any transfer credits must be included on the degree plan. Courses requested for transfer must meet all criteria for credit transfer (see general transfer policies) to be approved by the department.

Students seeking transfer credit may also be asked to provide the published course description, and learning objectives, course requirements, including assignments and grading criteria, information on the course syllabus, textbook, etc. to the program advisor for consideration.

Degree Requirements

Course Level Requirements
Graduate courses are numbered 500 and above, and are used to satisfy the requirements of graduate programs. Master's degree programs must have a minimum of 30 semester hours of courses numbered at 500 and above. Doctoral programs require a minimum of 60 semester hours.

Up to nine credit hours of course work completed as a non-degree student may be credited subsequently to a degree program with the approval of the graduate program faculty in consultation with the student's graduate advisor.

Note: Upon prior written permission of the instructor, the academic advisor, and the department head, a currently enrolled undergraduate student may take 500-level courses.

All graduate programs require a culminating activity in the form of a thesis, practicum, research project, comprehensive exam, or capstone experience. In addition, some programs require a qualifying examination for advancement to candidacy may require an oral defense at the termination of the program. Refer to the academic department for specific culminating degree requirements or if a qualifying examination is necessary. Information on research activities is presented below.

Dual-listed Courses
Upon approval by the Graduate Curriculum Committee, courses numbered 400-599 may be dual-listed allowing undergraduate and graduate students to enroll simultaneously. All dual-listed courses may be offered independently at either the graduate or undergraduate level.

Note: At least 70 percent of a student's master's degree program must be in courses that are at the 500 level and not dual listed. All courses in the doctoral program must be at the 500 level or above.

Grades
Grades of "A," "B," "C," "D," and "F" are used and are computed in the GPA. Other marks used are "I," incomplete; "W," withdrawn; "NC," no credit; "P," passing. At the discretion of programs, "Pass/Fail" ("P/F") grades may be allowed for research, practicum, and thesis courses. "I," "W," "NC," and "P" grades are not counted in determining the GPA. Additionally, "P" grades for graduate level in-service courses are not applicable toward degree completion. Courses for which "C," "D," "F," "I," "W," or "NC" grades are awarded shall not count in graduate degree programs and shall not satisfy program deficiency requirements.

Incomplete ("I") grades are temporary grades given to a student only in an emergency case and at the discretion of the instructor.

At the end of the semester following the one in which an "I" is given, the "I" becomes the grade that is submitted by the instructor to the Registrar's Office. If the instructor does not submit a grade by the deadline for that semester, the grade becomes an "F." A grade of "I" given spring semester must be addressed by the end of the following fall term.

Extension of the time to complete work may be made in exceptional circumstances at the discretion of the instructor. A student with an "I" grade, however, may not change the "I" by enrolling in the same course another semester.

Grades can be changed, using the Special Grade Report, within the first two weeks of the semester following the receipt of the original grade by the Registrar's Office. However, students wishing to appeal an assigned grade must follow the academic appeals procedure and must initiate the appeals process within the semester following receipt of the contested grade.

GPA Requirement
Graduate students may repeat a maximum of six hours of graduate credit. No course may be repeated more than once. When a course is repeated, the last grade earned is computed into the student's GPA. The previously attempted courses and grades remain in the academic record but are not computed in the overall average. Transcripts will contain a statement indicating the grade point average has been re-computed and stating the basis for re-computation.

To remain in good graduate standing, a graduate student must maintain a GPA of 3.00 or better. If the cumulative graduate GPA falls below 3.00, a graduate student shall be placed on probation. Students have one semester to show progress toward good standing. Specific program requirements may be different.

Students may not apply coursework with a grade lower than a "B" toward graduation requirements.

Student Termination
A student's degree program may be terminated for one or more of the following reasons:

- The student's GPA falls below 2.50
- The student is placed on probation a second time.
- The student fails to maintain the cumulative 3.0 GPA standard.
- The student fails the written and/or oral comprehensive examination or its approved equivalent.
- The student submits an unsatisfactory thesis, or other culminating requirement.
- The time limit established for the degree program expires before the degree requirements are completed.

Program Time Limits
The maximum time allowed for the completion of a graduate degree is six calendar years beginning with the first semester of enrollment after admission has been granted. The student may request an extension of time by written request to the student's advisor, then to the student's graduate committee. Some programs may have shorter time limits.

Termination Appeal
A student may appeal termination from a program with a written petition to his/her program department head, within six weeks of official notification of termination.

Plagiarism
The following is the approved definition of plagiarism:

Plagiarism is the act of appropriating the written, artistic, or musical composition of another, or portions thereof; or the ideas, language, or symbols of same and passing them off as the product of one's own mind. Plagiarism includes not only the exact duplication of another's work but also the lifting of a substantial or essential portion thereof.

Regarding written work in particular, direct quotations, statements which are a result of paraphrasing or summarizing the work of another, and other information which is not considered common knowledge, must be cited or acknowledged, usually in the form of a footnote.

As long as a student adequately acknowledges his or her sources and as long as there is no reason to believe that the student has attempted to pose as the originator, the student shall not be charged with plagiarism even though the form of the acknowledgement may be unacceptable. However, students should be aware that most professors require certain forms of acknowledgment and some may evaluate a project on the basis of form.

Graduation Checklist

All graduate students must apply for graduation no later than February 15 for Fall graduates and September 15 for Spring graduates. The student has the responsibility for completing an Intent to Graduate form with the Registrar's Office.

If the student does not complete all requirements for the degree, and,

therefore, does not graduate at the end of the proposed semester, the application shall be placed in the deferred file. The student must give written notice to the Registrar's Office when he or she wishes to appear again on the tentative list of graduates.

Graduation requirements are checked in accordance with one specific CMU catalog. The catalog used to meet graduation requirements is normally the one published for the academic year during which the student first enrolls after admission to CMU. The student must specify the catalog under which he or she wishes to be evaluated and must meet all requirements in that catalog. The student may select any subsequent catalog up to and including the current one, provided the student was in attendance at CMU during that academic year. However, a student may not choose to meet some requirements in one catalog and other requirements in another catalog.

CMU reserves the right to modify or change catalog provisions from time to time in order to fulfill the CMU Role and Mission or to accommodate circumstances beyond its control. Any such changes or modifications may be implemented as applicable to all or some students without prior notices, without obligation, and unless specified otherwise, are effective when made. CMU reserves the right to terminate or modify program requirements, content, and the sequence of program offerings from time to time for educational or financial reasons that it deems sufficient to warrant such actions.

Research Activities

Research is an important component of graduate studies. Specific research requirements and activities are defined by each degree program specifically.

Sponsored Programs

The Office of Sponsored Programs mission is to provide support to faculty and other University personnel in obtaining and administering external funds for research and other scholarly activities. Research at Colorado Mesa University includes explorations that lead to the discovery and dissemination of new knowledge, the development of new applications of existing knowledge, the development of new paradigms for teaching and learning, and/or the related creative activities in the fine arts.

The Office of Sponsored Programs is responsible for protecting university interests through the review of sponsored project proposals to non-university sources, contract and grant award review and negotiation, administration of award funds, and policy and procedure initiation and implementation.

Human Subjects and Animal Research

All research conducted by faculty, staff, or students that involves human subjects must be reviewed and approved by the Human Subjects Committee (also known as the Institutional Review Board or IRB). All research conducted by faculty, staff, or students that involves animals must be reviewed and approved by the Institutional Animal Care and Use Committee (IACUC). Graduate student research to fulfill course, thesis, or dissertation requirements is also subject to this regulation.

The Office of Sponsored Programs encourages all students to meet with their advisor if they intend to do research with humans or animals. Human subject research can include something as simple as an interview or survey. Failure to obtain approval by the IRB or IACUC before beginning a research project can be grounds for rejecting a thesis or dissertation and constitutes a serious breach of academic research ethics and federal law.

The policy, procedure, and forms required for human subject or animal research are available on the Sponsored Programs website at: coloradomesa.edu/sponsoredprograms. In addition, students may contact the Office of Sponsored Programs.

Research Misconduct

In accordance with federal regulations, the University has in place a Misconduct in Research Policy. This policy applies to the conduct of research and/or related activities, whether the research is funded or not and regardless of: the field of study; presentation and/or publication of results; process of applying for funds; expenditure of project funds; and fiscal reporting on the use of project funds. This policy applies to all faculty, students, administrators, and staff on all Colorado Mesa University campuses.

As defined in the Colorado Mesa University Misconduct in Research Policy, research misconduct includes fabrication, falsification, or plagiarism in proposing or performing research; abuse of confidentiality or other practices that seriously deviate from those commonly accepted within the academic community for proposing, conducting, and reporting on research; and plagiarism or abuse of confidentiality in reviewing proposals for a funding agency. The definition of research misconduct does not include honest error or differences of opinion or interpretations or judgments of data. The definition contained in this policy is not intended to override or contradict provisions of other regulations or policies, in particular those policies governing human research subjects and animal welfare. A finding of substantive violation of specific policies in these areas will also be considered misconduct under this policy. A copy of this policy may be found at coloradomesa.edu/sponsoredprograms/policies.html.

Master of Business Administration

Colorado Mesa University began offering the first of its graduate level programs—the Master of Business Administration (MBA)—in 1997-98. The MBA program at Colorado Mesa University is administered by the Department of Business. The department is guided on academic policy matters by the Office of Graduate Studies.

The Colorado Mesa University MBA is a challenging program designed to prepare graduates for the changing business world. The degree is awarded after successful completion of 36–45 semester hours of rigorous study. The program is designed to provide the student with a broad background in business while allowing the student to focus on a specified area of study, if desired. To this end, students acquire knowledge of management operations;

an appreciation of the interrelationships of the functional areas of business; an understanding of the economic, political and social environment in which businesses function; and behavioral skills that are essential in the manager's role in the implementation of business decisions. The MBA program endeavors to provide an atmosphere conducive to the development of each student's ability to think in a creative manner. The program makes extensive use of lectures, seminars, group projects, case studies and independent research.

The Colorado Mesa University MBA has two basic components: a 30 hour core and a 6–15 hour track, which includes a research component. The program is open to all baccalaureate-holding applicants who can demonstrate through academics an appropriate background in the core requirements that include work in statistics, computer literacy, management, finance, marketing, and accounting regardless of the undergraduate field of study. Students without this background or adequate depth in this background will be required to complete leveling requirements.

Admission to the MBA Program
See Department specific requirements.

Candidates not meeting all the specific requirements may be admitted under conditional status.

MBA for Those Without a Business Degree
The opportunity for study is available for the non-business degree holder. For these students, a series of leveling courses will be identified.

Program of Study

Required Courses (30 hours):

ACCT 500	Managerial Accounting
BUGB 500	Advanced Business Law and Ethics
FINA 500	Financial Strategy
MANG 500	Advanced Management Theory
MANG 501	Operations Management
MANG 510	Leading Organizationsr
MANG 590	Business Strategy
MARK 500	Marketing Strategy

Research Courses:

BUGB 530	Research Design
BUGB 595	Research Practicum

Please see the MBA Director for Track Courses (6–15 hours). Tracks include the Professional Track, the Management Information Systems Track, the Sports Management Track, the Medical Informatics Track, and the Corporate Trainer Track.

Students are required to meet with their advisor and submit information by the appropriate deadlines.

All graduate courses for the MBA are listed in the Course Descriptions section of this catalog in the prefix areas of Accounting (ACCT), Business Administration (BUGB), Computer Information Systems (CISB), Economics (ECON), Education (EDUC), Entrepreneurship (ENTR), Finance (FINA), Health Sciences (HSCI), Human Resource Management (HRMA), Kinesiology (KINE), Management (MANG), Marketing (MARK), and Nursing (NURS).

Leveling Courses
An applicant must demonstrate—through academic transcripts, CLEP, or a formal test-out process—an appropriate background in Financial Accounting, Business Information Technology, Managerial Finance, Principles of Management, Principles of Marketing, and Business Statistics. An applicant without this background will be required to score at a sufficient level on an entrance qualifying examination administered by the CMU MBA Office. The exam will cover the topics listed above. A student can prepare for the exam through independent study based on a program-supplied study guide. CMU courses that provide that background are: ACCT 201 Financial Accounting, CISB 101 Business Info Technology, FINA 301 Managerial Finance, MANG 201 Principles of Management, MARK 231 Principles of Marketing, and CISB 241 Intro to Business Analysis or STAT 241. This requirement must be met prior to acceptance to the MBA.

General Policies
Up to nine credit hours may be taken in a "non-degree seeking student" status and later applied to the program requirements. Up to nine credit hours of applicable courses, with a grade of "B" or higher, may be transferred from a regionally accredited institution into the program. Additional information may be found in the Transfer Credit section.

Students transferring in core classes are held to the same requirements for completion of comprehensive exams as are students who took their core courses from CMU.

Master of Arts in Education

The degree is designed using the cohort model with a group of participants completing all requirements in a four-semester. The current cognate areas are Applied Mathematics, Educational Leadership (EDLD), English for Speakers of Other Languages (ESOL), Rhetoric and Literary Studies, Social Sciences, Teacher Leader (EDTL), Exceptional Learner (EDSE) and Initial Teaching Licensure (ITL) (Elementary; Secondary).

The Master of Arts in Education is designed as a dynamic program to meet the needs of people already holding a degree who wishto earn teacher licensure or current teachers who wish to gain expertise in additional state endorsement areas. The degree is awarded after successful completion of 30-36 semester hours of college course work aligned with site-based internship experiences. The program is designed to provide the student with eleven hours of core knowledge in educational design, theory, assessment, technology and research. The additional hours allow the student to focus on a particular endorsement area.

Admission to the program follows the guidelines for graduate admission procedures indicated in this catalog. The application packet (available online (coloradomesa.edu/teachered/masters.html) lists additional admissions materials required for acceptance.

Capstone
The Master of Arts in Education requires the successful completion of a capstone experience: either a capstone presentation or competency examination. See individual program information for details.

Graduate Certificates-Education
Each cognate group can also be completed as a graduate certificate for candidates not wishing to complete a full master's degree program. The same graduate admissions process applies to graduate certificates.

Master's Core Courses:

EDUC 500	Culture and Pedagogy
EDUC 501	Educational Technology
EDUC 502	Theory, Design, and Assessment of Curriculum
EDUC 503	Introduction to Educational Research

ESOL Cognate Courses:

EDUC 504	Methods of Teaching English as a Second Language
EDUC 510	Strategies in the Content Area
EDUC 535	Internship in ESOL: K-6
ENGL 543	Linguistic Diversity and Multicultural Literacies
EDUC 545	Internship in ESOL: 7-12
EDUC 554	Theories of Second Language Acquisition
EDUC 555	Multicultural Narratives
EDUC 556	Assessment in English as a Second Language
EDLD 504	Best Practices in Curriculum, Assessment, Instruction

EDLD Cognate Courses:

EDLD 505	Reform and Organizational Change in Education
EDLD 515	Dynamic School Leadership in a Democratic Society: Introduction to School Administration
EDLD 520	Principalship I & II
EDLD 530	Legal Aspects of School Administration: Educational Policy and the Law
EDLD 531	School Finance & Budgeting
EDLD 535	Internship in EDLD: K-6
EDLD 545	Internship in EDLD: 7-12
EDLD 540	School Improvement and Accountability
EDLD 542	Instructional Supervision and Management/HR
EDLD 544	Strategies in School Improvement

EDTL Cognate Courses:

EDTL 510	Teacher Leadership I
EDTL 513	Information Based Educational Practices
EDTL 518	Diversity and Differentiated Instruction
EDLD 504	Best Practices in Curriculum, Assessment, Instruction
EDLD 515	Dynamic School Leadership in a Democratic Society: Introduction to School Administration
EDLD 540	School Improvement and Accountability
EDLD 542	Instructional Supervision and Management/HR
EDLD 544	Strategies in School Improvement

EDSE Cognate Courses:

EDSE 500	Foundations of Special Education Including Law
EDSE 501	Instructional Strategies in Special Education
EDSE 502	Behavioral Interventions for the Learner with Special Needs
EDSE 503	Methods of Teaching Students with Mild Disabilities Reading and Math
EDSE 506	Educating Students with Low Incidence Disabilities in Inclusive Environments

EDSE 510	The Learner Who Is Twice Exceptional, Including Gifted and Talented
EDSE 515	Internship K-6 Elementary Practicum in Special Education
EDSE 520	Internship 6-12 Secondary Practicum in Special Education

Initial Teacher Licensure

Students already holding a Bachelor's degree may pursue initial teacher licensure at CMU in Elementary or Secondary education. Secondary licensure may be obtained in: Biology, History, English, Mathematics, Geology, and Spanish.

For students pursuing coursework and preparation that leads solely to professional licensure to teach, the Center for Teacher Education offers an intensive post-baccalaureate preparation program that can be completed in 12 months. The same coursework is also available at the undergradaute level in a 3 semester sequence at a somewhat slower pace. Either of these options lead to a recommendation for licensure with successful program completion.

The initial teacher preparation coursework is incorporated in the MA, Education degree, allowing a student to complete teacher licensure and a master's degree in five semesters. The coursework begins at the post-baccalaureate initial teacher licensure level and includes internship experiences. The Master of Arts in Education core content follows in the second year; these courses are shown in the Graduate Education programs section.

Please contact the Center for Teacher Education at 970.248.1618 for more information or see the program website at: coloradomesa.edu/teachered/pbl.htm

Elementary ITL Courses:

EDUC 591	Foundations of Curriculum Instruction & Assessment
EDUC 586A	Accommodating Diverse & Exceptional Needs, K-6
EDUC 585	Modes of Inquiry
EDUC 587	Literacy Education, K-6
EDUC 588	Math Education, K-6
EDUC 592A	Directed Teaching, Elementary
EDUC 599A	Directed Teaching, Elementary

Secondary ITL:

EDUC 591	Foundations of Curriculum Instruction & Assessment
EDUC 586B	Accommodating Diverse & Exceptional Needs, 7-12
EDUC 584	Integrated Literacy
EDUC 580	Content Methodology Practicum
EDUC 580	a-d Secondary Methods
EDUC 592B	Directed Teaching, Secondary
EDUC 599B	Directed Teaching, Secondary

Up to nine credit hours may be taken as non-degree seeking and later applied to program requirements. Up to nine gradaute credit hours of applicable courses, with a grade of B or higher, may be transferred from a regionally accredited institution into the master's degree program. Courses for transfer must be approved by the CTE Graduate Committee to meet program requirements. MA core classes are not accepted for transfer.

Graduate Certificate in Health Information Technology Systems

The Graduate Certificate in Health Information Technology Systems prepares health care professionals to support the collection, management, retrieval, exchange, and/or analysis of information in electronic form, in health care and public health organizations. This role functions to provide comprehensive management of health care information and its secure exchange between health care consumers and providers. Completion of the Graduate Certificate requires 15 semester credit hours of study. The certified specialist works within the health care environment interacting with both health care professionals and Information Technology experts. The following subject areas are offered in the certificate program: Introduction to Healthcare Informatics; Database Management Systems; Information Systems Security and Privacy; Information Systems Life Cycle; Semantic Representation. Training and coursework towards the certificate maintains a broad perspective of health care informatics while providing an in-depth knowledge of nursing informatics. The same graduate admission process applies to the Graduate Certificate Program.

Program of Study:

CISB 500	Management of Information Systems (3)
CISB 505	Advanced Project Management (3)
HSCI 501	Advanced Health Informatics I: Data Analysis (1)
HSCI 506	Advanced Health Informatics II: Project Design and Implementation (2)
NURS 502	Health Information Systems (3)
NURS 505	Quality Assessment and Improvement in Health Care Settings (3)

Master of Science in Nursing

The Master of Science in Nursing (MSN) program is designed for students already possessing a baccalaureate degree in nursing and adds the first graduate step on the nursing career ladder. The MSN degree provides graduates with a foundation for practice as a leader and educator in health care systems or academic settings. The MSN program is a hybrid format, providing flexibility for students to remain in their current work positions using online course delivery methods; this format provides opportunities for personal interaction with faculty and peers in focused intensive sessions at selected points during each semester. MSN graduates will be prepared to advance to higher levels of nursing education including the Doctor of Nursing Practice (DNP) or doctoral programs at other institutions. Admission to the University does not guarantee admission to the program; a separate admission application to the program is required. The MSN program at Colorado Mesa University is administered by the Department of Health Sciences. The department is guided on academic policy matters by the Director of Graduate Studies.

The MSN program contains 18 credit hours of core knowledge essential for practice as a leader including coursework in nursing theory and research, health information systems, organization leadership, health policy and quality improvement and three credit hours for a final capstone or thesis project. There are three 15-credit hour cognates to choose from: Advanced Nursing Practice Cognate, Nursing Education Cognate, or Leadership and Administration Cognate. Graduates of master's degree programs in nursing are prepared with additional knowledge and clinical expertise building on baccalaureate nursing practice. The MSN program at Colorado Mesa University is based on the "Essentials of Masters Education for Advanced Nursing Practice" identified by the American Association of Colleges of Nursing. The ten AACN Essentials include scientific background for practice, organizational and systems leadership, quality improvement and safety, translational scholarship for evidence-based practice, information and healthcare technology for transformation of microsystems, healthcare policy for advocacy in health care, inter-professional collaboration for improving patient and population health outcomes, clinical prevention and population health for improving health, advancing professionalism and professional values, and master's level nursing practice.

Admission to the MSN Program
See Department specific requirements.

Candidates not meeting all of the above requirements may be admitted under conditional status.

Program of Study

Required Core Courses:
NURS 500 Theoretical Foundations
NURS 501 Nursing Research Methods
NURS 502 Health Information Systems
NURS 503 Organizational Leadership
NURS 504 Health Policy
NURS 505 Quality Improvement

Leadership and Administration Cognate:
NURS 525 Pathophysiologic Concepts
NURS 526 Pharmacology for ANP
NURS 527 Health Assessment for ANP
BUGB 500 Advanced Business Law and Ethics
HRMA 520 Human Resource Management

Advanced Nursing Practice Cognate:
NURS 525 Pathophysiologic Concepts
NURS 526 Pharmacology for ANP
NURS 527 Health Assessment for ANP
NURS 530 Chronic Illness Management
NURS 535 Health Promotion and Disease Prevention

Nursing Education Cognate:
NURS 525 Pathophysiologic Concepts
NURS 526 Pharmacology for ANP
NURS 527 Health Assessment for ANP
NURS 540 Teaching Strategies for Nurse Educator
NURS 545 Curriculum Design and Evaluation
NURS 560 Nurse Educator Practicum

Capstone
NURS 575 Capstone Practice Project
OR
NURS 580 Thesis

Other Requirements:
Completion of Oral Comprehensive Exam: Comprehensive Exams will be scheduled during the exam week that the student's scholarly project is scheduled.

Students are required to meet with their advisor and submit information by the appropriate deadlines.

All graduate courses for the MSN are listed in the Course Descriptions areas of Nursing (NURS).

General Policies
Up to nine credit hours may be taken in a "non-degree seeking student" status and later applied to the program requirements. Up to nine credit hours of applicable courses, with a grade of "B" or higher, may be transferred from a regionally accredited institution into the program. Additional information may be found in the Transfer Credit section.

Student Termination
A student's degree program may be terminated for one or more of the following reasons:

- The student is placed on probation a second time.
- The student fails to maintain the cumulative 3.0 GPA standard.

Doctor of Nursing Practice

The Doctor of Nursing Practice (DNP) degree is designed for those nurses who are interested in assuming an advance practice nursing role as a Family Nurse Practitioner (FNP). DNP graduates are prepared as clinical experts in the delivery of primary care, with a focus on critical thinking, leadership, and political policy skills needed to advocate and create changes in healthcare practice at all levels. The program is a hybrid format, providing flexibility for students to remain in their current work positions using online course delivery methods. Opportunities for personal interaction are included with faculty and peers in focused intensive sessions at selected points during each semester. Clinical coursework and immersion experiences will be arranged in primary care settings. Students will likely complete most clinical requirements in their home community, but may need to travel for specialized clinical experiences including rural health care settings. Admission to the University does not guarantee admission to the program; a separate admission application to the program is required.The DNP program at Colorado Mesa University is administered by the Department of Health Sciences. The department is guided on academic policy matters by the Director of Graduate Studies.

The DNP program includes 27 credit hours of core knowledge essential for practice as a leader, including coursework in nursing theory and research, health information systems, organization leadership, health policy, quality improvement, statistics, and evidence-based practice; 46 credit hours of advance practice nursing cognate courses that develop family nurse practitioner's knowledge and skills so they are prepared to care for

individuals across the lifespan. Content includes key health issues facing our nation related to chronic illness management, health promotion and disease prevention strategies; three credit hours of elective coursework; and six credit hours for a final DNP scholarly capstone project. The program includes over 1000 hours of immersion in clinical practice to build and assimilate knowledge for advanced practice at a high degree of complexity. These experiences also provide the context within which the final DNP scholarly project is completed.

The DNP curriculum at Colorado Mesa University is based on the "Essentials of Doctoral Education for Advanced Nursing Practice" identified by the American Association of Colleges of Nursing, the National Organization of Nurse Practitioner Faculty's Independent Practice Competencies and Primary Care Competencies for FNP. The ten AACN Essentials include scientific underpinnings for practice, organizational and systems leadership for quality improvement and safety, clinical scholarship and analytical methods for evidence-based practice, information systems/technology and patient care technology for the improvement and transformation of health care, healthcare policy for advocacy in health care, inter-professional collaboration for improving patient and population health outcomes, clinical prevention and population health for improving health, advance nursing practice, and specialty-focused competencies to prepare graduates for national specialty certification as an advance practice nurse. Graduates prepared for an advance practice role as a Family Nurse Practitioner will demonstrate practice expertise, specialized knowledge, and expanded responsibility and accountability in the care and management of individuals and families.

The DNP program includes three credit hours of elective coursework giving students an opportunity to focus learning in an area of interest depending on their clinical practice setting. Some graduates may choose to focus on building leadership and practice management skills; others may choose elective coursework that prepares them for roles in public health, nursing education or community-based practice settings.

The DNP degree is built upon the generalist foundation acquired through a baccalaureate or advanced generalist master's in nursing. The curriculum will be individualized for students based on their prior education and experience. A candidate with a baccalaureate degree would take all courses in the program; someone who already possesses a master's degree would take coursework to achieve competencies not previously attained. Both MSN and DNP students will take similar core content courses in the beginning and diverge onto different educational tracks over time. Some students may choose to complete a MSN in their progress to the DNP; others will focus entirely on the DNP curricula. The DNP is the final step on the nursing career ladder at Colorado Mesa University.

Admission to the DNP Program
See Department specific requirements.

Candidates not meeting all of the above requirements may be admitted under conditional status.

Program of Study
Family Nurse Practitioner (FNP)

Required Core Courses:

NURS 500	Theoretical Foundations
NURS 501	Nursing Research Methods
NURS 502	Health Information Systems
NURS 503	Organizational Leadership
NURS 504	Health Policy
NURS 505	Quality Improvement
NURS 625	Statistics for Health Sciences
NURS 626	Epidemiology
NURS 700	Evidence-based Practice

Advanced Nursing Practice Cognate:

NURS 525	Pathophysiologic Concepts
NURS 526	Pharmacology for ANP
NURS 527	Health Assessment for ANP
NURS 530	Chronic Illness Management
NURS 535	Health Promotion and Disease Prevention
NURS 600	Family Nurse Practitioner Issues
NURS 601	Primary Care of the Child/Adolescent
NURS 602	Primary Care of the Adult
NURS 604	Primary Care of Rural and Vulnerable Populations
NURS 603	Primary Care of the Elderly
NURS 610	Clinical Practicum – Child & Adolescent
NURS 620	Clinical Practicum – Adult
NURS 630	Clinical Practicum – Elderly
NURS 640	Clinical Practicum – Rural Health Care
NURS 650	Family Nurse Practitioner Preceptorship
NURS 660	Transition into Advanced Practice Nursing

Capstone/Thesis

NURS 750	Capstone: Application of EBP I
NURS 760	Capstone: Application of EBP II

Other Requirements:
Completion of Written/Oral

Comprehensive Exam:
Comprehensive Exams will be scheduled during the exam week that the students' scholarly project is scheduled.

Students are required to meet with their advisor and submit information by the appropriate deadlines.

All graduate courses for the DNP are listed in the Course Descriptions areas of Nursing (NURS).

General Policies
Up to nine credit hours may be taken in a "non-degree seeking student" status and later applied to the program requirements. Up to 21 credit hours of applicable courses, with a grade of "B" or higher, may be transferred from a regionally accredited institution into the program. Additional information may be found in the Transfer Credit section.

Graduate Certificate in Social Science

The Graduate Certificate program in Social Science provides licensed secondary social science teachers the credentials required by the Higher Learning Commission to teach concurrent college History or Political Science courses. The program also provides professionals and post-graduates an opportunity to take individual courses to enhance their education in History and Political Science or to serve as a bridge to other graduate programs in the social sciences.

Completion of the Graduate Certificate in Social Science requires 18 semester hours of study with an option to complete a Master of Arts in Education at Colorado Mesa University. The same graduate admission process applies to the Master of Arts program and the Graduate Certificate program.

Program of Study:

HIST 501	Early American History (3)
HIST 502	Late American History (3)
HIST 510	Early European History
HIST 511	Modern European History (3)
POLS 501	Theories of Political Science (3)
POLS 505	American Government (3)

Course Descriptions

The course descriptions in this catalog indicate the content of the course and prerequisites when applicable. Courses are listed in alphabetical order with a four-letter prefix code, followed by number and title. The number in parentheses at the end of the course title indicates the credit granted, in terms of semester hours, for each course. Generally, the number of semester hours is the number of times a class will meet each week. Exceptions are noted in individual course descriptions and, in most cases, prerequisites and/or corequisites stated. The course number after the prefix indicates the college year in which the courses should ordinarily be taken.

100–199. . . . . Freshman year
200–299. . . . . Sophomore year
300–399. . . . . Junior year
400–499. . . . . Senior year

Courses numbered 01-099 are developmental in nature, not intended for transfer purposes, and will not usually fulfill degree requirements.

Colorado Mesa University reserves the right to withdraw any program or course which is not justified due to lack of enrollment or availability of instructor. Other courses may be added if there is sufficient demand. Certain courses are only offered during the fall or spring semesters, or may be available only in alternating years. It is the student's responsibility to meet with their advisor and check the two-year course matrix on the Colorado Mesa University website for course availability. Learn more at **coloradomesa.edu/academics**.

ACCOUNTING (ACCT)

ACCT 201 Principles of Financial Accounting (3)
A basic course that introduces the concepts of bookkeeping, generally accepted accounting principles, and financial statements.

ACCT 202 Principles of Managerial Accounting (3)
A basic course that introduces the use of accounting information in managerial decision making, control, and planning. Prerequisites: ACCT 201, and CISB 101 or CISB 205.

ACCT 311 Advanced Managerial Accounting (3)
An advanced course primarily for non-accounting majors that provides in-depth coverage on the applications of accounting information in decision-making, organization, control and planning. Prerequisites: ACCT 202, and CISB 101 or CISB 205.

ACCT 321 Intermediate Accounting I (5)
Development of a foundational understanding of Generally Accepted Accounting Principles and their application to external financial statements. Prerequisite: ACCT 201.

ACCT 322 Intermediate Accounting II (4)
Continuation of ACCT 321. Prerequisite: ACCT 321.

ACCT 331 Cost Accounting (3)
Costs and their relationship to planning, controlling, inventory valuation, and decision making. Prerequisites: ACCT 202 and
CISB 101.

ACCT 350 Ethics for Accounting Professionals (3)
The field of ethics as applied to the accounting and finance professions. Ethical standards of the profession, accounting and finance scandals in recent history, and methods to overcome ethical dilemmas encountered as professionals. Prerequisite: ACCT 321.

ACCT 360 Professional Preparation I (1)
Professional preparation of resumes and job interviewing skills through mock interviews performed by community professionals using the media studio to videotape and critique the interviewee and review of the resume as it applies to the accounting industry. Prerequisites: ACCT 201, ACCT 202, and ACCT 321.

ACCT 392 Accounting Information Systems (3)
A study of the concepts and design of the Accounting Information System with emphasis on the internal control structures, requirements, and professional standards.
Prerequisites: ACCT 321 and CISB 101.

ACCT 393 Cooperative Education (3-12)
Cooperative Education provides students an opportunity to put their education to practical use in the workplace under the joint supervision of an employer participating in the Cooperative Education program and a faculty member designated by the institution. (See "Cooperative Education" in this catalog).

ACCT 395 Independent Study (1-3)

ACCT 396 Topics (1-3)

ACCT 399 Internship (1-10)

ACCT 401 Governmental Accounting (3)
Accounting principles as they apply to governmental and non-profit units. Prerequisite: ACCT 322.

ACCT 402 Advanced Accounting (3)
Consolidated financial statements, partnership accounting, bankruptcy, and international operations. Prerequisite: ACCT 322.

ACCT 411 Auditing I (3)
Scope and purposes of the attestation work of a certified public accountant focusing on generally accepted auditing standards (GAAS). Includes theory of auditing, professional ethics, legal liability of the auditor, and internal control. Prerequisites: ACCT 322, and CISB 241 or STAT 241, and senior standing.

ACCT 412 Auditing II (3)
Continuation of ACCT 411. This course provides coverage of the application of auditing theory to financial statements, including examination of the audit programs, procedures, and work papers used in each phase of an audit. Prerequisite: ACCT 411.

ACCT 441 Individual Income Tax (4)
Federal Income Tax Law in-depth as it relates to individual taxpayers. Introduction to various tax reference resources. Prerequisite: ACCT 322, senior standing.

ACCT 442 Advanced Tax and Tax Research (5)
Federal Income Tax Law for corporations, partnerships, estates, trusts, and gifts. In-depth experience with tax research resources, research methods and related projects. Required participation in the Tax Assistance Program to acquire practical experience in communication with taxpayers and preparation of tax returns. Prerequisite: ACCT 441.

ACCT 460 Professional Preparation II (1)
This course is a concentrated review of accounting subjects in preparation for the CPA exam using self-study techniques and professor-led discussions and review. Prerequisites: ACCT 201, ACCT 202, ACCT 321, ACCT 322, ACCT 360, ACCT 401, and ACCT 441.

ACCT 470 Fraud and Forensic Accounting (3)
Exploration of investigative techniques, interviewing techniques, and reporting processes at different levels of judicial and prosecutorial environments. Specific skills in detecting and investigating fraud developed and various reporting methodologies explored. Includes presentations and speakers from fraud investigative environments. Prerequisite: ACCT 201.

ACCT 493 Cooperative Education (3-12)
See description of ACCT 393.

ACCT 495 Independent Study (1-3)

ACCT 496 Topics (1-3)

ACCT 500 Managerial Accounting (3)
Provides students with an understanding of management information systems which are used in the decision-making process. The class is designed with a "hands-on" approach. It will encourage student participation and interaction through the use of computer projects, case studies, and classroom discussion. Topics covered include basic cost accounting concepts and terminology, product costing and pricing, planning and controlling a business operation through budgets and variance analysis, and managerial decision-making using such techniques as cost-volume-profit analysis and variable costing.

ACCT 505 Advanced Fraud and Forensic Accounting (3)
Exploration of investigative techniques, interviewing techniques, and reporting processes at different levels of judicial and prosecutorial environments. Specific skills in detecting and investigating fraud developed and various reporting methodologies explored. Includes presentations and speakers from fraud investigative environments. Demonstration of mastery of material through graduate level projects, writing, and presentations. Prerequisites: ACCT 201, ACCT 322, and permission of instructor.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

ADDICTIONS COUNSELING (ADAP)

ADAP 301 Foundations of Addictions Counseling (3)
Provides a foundation for the theoretical, practical, and applied addictions counseling skills necessary for individuals wanting to work in the addictions field. Prerequisite: PSYC 233.

ADAP 350 Cultural and Ethical Issues in Addictions Treatment (3)
Provides an overview of ethical, cultural, and legal considerations associated with the field of addictions. Prerequisite: ADAP 301.

ADAP 380 Pharmacology and Addictions (3)
Provides an overview of pharmacology and infectious diseases associated with the field of addictions. Prerequisite: ADAP 301.

ADAP 401 Special Populations and Addictions (3)
Outlines the unique treatment needs of special addiction populations and the promising new practices within the addictions field. Prerequisite: ADAP 301.

ADAP 420 Addiction Counseling Approaches (3)
Outlines the different evidence-based treatment approaches in the addictions field. Prerequisites: ADAP 301 and ADAP 350.

ADAP 499 Internship (3)
Professional practice with individuals, groups, and communities in various sites under professional supervision. Prerequisites: ADAP 301, ADAP 350, and ADAP 420.

AGRICULTURAL SCIENCE (AGRS)

AGRS 100 Practical Crop Production (3)
Production and adaptation of cultivated crops. Emphasis on crops grown in the western region of the United States. Growth, development, production and use covered. Corequisite: AGRS 101L

AGRS 100L Practical Crop Production Laboratory (1)
Laboratory experiences supporting instruction in the production and adaptation of cultivated crops. Emphasis on crops grown in the western region of the United States. Growth, development, production and use covered. Corequisite: AGRS 100.

AGRS 101 Fermented Beverages (3)
Introduction to the fermented beverage industry, relationships between field produce and finished product, and basic sensory attributes and palate training. Emphasizes the wine industry, but also includes cider and beer.

AGRS 102 Agriculture Economics (3)
Focus on economic principles applied to agriculture through price discovery with producer supply and consumer demand, governmental politices, rural development, and resource management.

AGRS 103 Introduction to Entomology (2)
AGRS 103L Introduction to Entomology Laboratory (1)
Covers insect identification and classification, introduces integrated pest management concepts, and an in-depth study of selected insects of agricultural economic importance.

AGRS 104 Agriculture Chemistry (3)
Introduction to the basic concepts of chemistry. Areas covered are designed to focus on chemical concepts that a student needs for agriculture-realted courses.

AGRS 105 Animal Science (3)
Fundamentals of livestock production. Principles of breeding, genetics, nutrition, health, and physiology of beef, sheep, swine, dairy, and horses. Focus on the animal science industry in general and each species industry in regard to history, current situation, and future.

AGRS 106 Fermentation Science (2)
Examination of fundamentals of microbiology and chemistry as they apply to fermented beverages, with an emphasis on the winemaking industry. Corequisite: AGRS 106L.

AGRS 106L Fermentation Science Laboratory (1)
Application of fundamentals of microbiology and chemistry as they apply to fermented beverages, with an emphasis on the winemaking industry. Corequisite: AGRS 106.

AGRS 110 Integrated Pest Management (3)
Identification and control of economically important weeds, insects and diseases through systems approach management concepts including cultivation, chemical and biological control mechanisms.

AGRS 118 Farm Structures and Green Houses (3)
Safety, hand and power tool use, farm building planning and site location, concrete, farm building design and construction and materials of construction. Greenhouse design, systems, management, and major greenhouse crops and their cultural needs.

AGRS 125 Agricultural Machinery (3)
Emphasizes the safe operation, construction, purpose, maintenance and adjustment of farm machinery.

AGRS 130 Vineyard Establishment and Management (3)
Exploration of vineyard establishment and winter/spring vineyard management practices. Emphasis on site selection, vineyard layout, vine varieties, soil preparation, planting methods, plant establishment and training/manipulation, and tools and equipment. Prerequisite: AGRS 100/100L. Corequisite: AGRS 130L.

AGRS 130L Vineyard Establishment and Management Laboratory (1)
Application of vineyard establishment and winter/spring vineyard management practices. Emphasis on site selection, vineyard layout, vine varieties, soil preparation, planting methods, plant establishment and training/manipulation, and tools

and equipment. Prerequisite: AGRS 100/100L. Corequisite: AGRS 130.

AGRS 131 Water and Irrigation: Principles and Practices (2)
Exploration of water, soil, and plant relationships; water quality assessment; principles of irrigation, methods, and systems. Prerequisite: AGRS 100/100L. Corequisite: AGRS 131L.

AGRS 131L Water and Irrigation: Principles and Practices Laboratory (1)
Applications in water, soil, and plant relationships; water quality assessment; principles of irrigation, methods, and systems. Prerequisite: AGRS 100/100L. Corequisite: AGRS 131.

AGRS 165 Winemaking I (3)
Exploration of the winemaking process; winemaking principles such as alcoholic and malo-lactic fermentations; juice additions; and winery hygiene and safety. Includes pre-harvest analyses, grape harvest, fruit processing, and filtration. Prerequisite: AGRS 100/100L and AGRS 106/106L. Corequisite: AGRS 165L.

AGRS 165L Winemaking I Laboratory (1)
Applications of the winemaking process; winemaking principles such as alcoholic and malo-lactic fermentations; juice additions; and winery hygiene and safety. Includes pre-harvest analyses, grape harvest, fruit processing, and filtration. Prerequisite: AGRS 100/100L and AGRS 106/106L. Corequisite: AGRS 165.

AGRS 170 Sensory Analysis (3)
Exploration of sensory training specific to wine production with a focus on the details of olfactory and taste transduction mechanisms. The class will focus on specific wine varietals, use of oak in winemaking, secondary fermentation, characteristics, and individual wine component threshold identification. Prerequisite: AGRS 100/100L and AGRS 106/106L.

AGRS 189 Viticulture Practicum (3)
Exploration of vineyard maintenance, through a combination of applied learning and work experience facilitated by experienced growers. Prerequisite: AGRS 130/130L.

AGRS 196 Topics (1-3)

AGRS 202 Winery Operations and Marketing (3)
Analysis of the annual winery operations cycle (includes equipment; health, safety, and sanitation; regulatory compliance requirements; and management of waste, storage, and distribution systems), and product distribution, sales, and marketing. Includes visitation to existing winemaking businesses.

AGRS 205 Farm and Ranch Management (3)
Provide students with practical experience in applying principles of economics, business, marketing and finance to the management of a farm/ranch operation.

AGRS 208 Agricultural Finance (3)
Emphasizes principles of finance and their application to agriculture and agribusiness, including the time value of money, net present value analysis, interest, credit lending institutions, financial statements and financial ratios.

AGRS 210 Agricultural Marketing (3)
Applied study of the agricultural marketing system. Methods of marketing crops and livestock. Emphasis on hedging with futures and options.

AGRS 224 Integrated Ranch Management (3)
Management pertaining to the economics of a ranching enterprise. Includes principles of system management, resource inventory and management, ranch decision making, nutrition, selection, record keeping, financial management, and marketing.

AGRS 225 Feeds and Feeding (4)
Basic nutrients, common feeds and feed additives, anatomy of digestive systems, and basic feeding practices for beef, sheep, and dairy. Lab devoted to calculating and balancing rations to fulfill nutrient requirement of farm animals for growth, finishing, reproduction, lactation, work, and wool production. Explores least cost ratio balancing.

AGRS 230 Farm Animal Anatomy and Physiology (3)
Introduction to basic concepts of farm animal anatomy and physiology. Emphasizes nutrition, reproduction, immunology, and growth of the basic farm species. Anatomy and physiology is taught in the context of applying basic principles to production practices in the industry including reproductive management, livestock nutrition management, and animal health practices. Prerequisite: AGRS 105.

AGRS 240 Introduction to Soil Science (3)
AGRS 240L Introduction to Soil Science Laboratory (1)
Formation, physical properties, chemical properties and management of soils emphasizing conditions affecting plant growth in the lab environment.

AGRS 245 Winemaking II (2)
Exploration of wine filtration, and post-fermentation wine stewardship techniques. Also includes the principles of wine composition, wine analytical techniques, and the relevance of these analyses to winemaking decisions. Prerequisites: AGRS 165/165L. Corequisite: AGRS 245L.

AGRS 245L Winemaking II Laboratory (1)
Applications of wine filtration, and post-fermentation wine stewardship techniques. Also includes the principles of wine composition, wine analytical techniques, and the relevance of these analyses to winemaking decisions. Prerequisites: AGRS 165/165L. Corequisite: AGRS 245.

AGRS 250 Live Animal and Carcass Evaluation (1)
AGRS 250L Live Animal and Carcass Evaluation Laboratory (2)
Explores meat carcass evaluation and the related yield and quality grading system. Emphasizes selection of breeding stock based on performance data. Covers comparative selection, grading, and judging of market and

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breeding classes of livestock based on knowledge of phenotype, performance, information, and/or carcass merit. Prerequisite: AGRS 105.

AGRS 255 Viticulture Harvest and Post-harvest Management (2)
Exploration of late summer and fall vineyard operations including: maturity sampling, bird netting, and fall harvest. Includes preparation of the vineyard for winter. Prerequisites: AGRS 100/100L. Corequisite: AGRS 255L.

AGRS 255L Viticulture Harvest and Post-harvest Management Laboratory (1)
Application of late summer and fall vineyard operations including: maturity sampling, bird netting, and fall harvest. Includes preparation of the vineyard for winter. Prerequisites: AGRS 100/100L. Corequisite: AGRS 255.

AGRS 260 Plant Propagation (3)
Theory, biology, and practical applications of plant propagation technologies. Propagation by seed, cuttings, budding, grafting, layering and tissue culture. Propagation environment, techniques of stock plant management and seed handling.

AGRS 265 Integrated Plant Health Management (3)
Multi-faceted approaches to the management of plant health through analysis of soil characterisitcs, nutrients, irrigation, and integrated pest management techniques for reducing pest susceptibility and enhancing crop production yield and quality. Prerequisites: AGRS 100/100L.

AGRS 270 Sciecne of Winemaking (2)
Investigation of scientific principles of wine production, including the physiology of grape berry development and wine grape processing.

AGRS 275 Winemaking III (3)
Application of winemaking principles to develop the problem-solving skills students will need to enter the workforce. An internship in a winery setting.

AGRS 288 Livestock Practicum (1)
AGRS 288L Livestock Practicum Laboratory (1)
Provides experiential learning with beef cattle, dairy cattle, swine and sheep.

AGRS 293 Cooperative Experience (5)
Employment in an agricultural production setting. Work experience in all facets of the operation. Guidance and supervision is the responsibility of the supervising employer and Coordinator of Production Agriculture. Emphasis on records, managerial decisions, and production agriculture skills.

AGRS 296 Topics: (1-4)

ANTHROPOLOGY (ANTH)

✓ **ANTH 202 Intro to Anthropology-GTSS3 (3)**
Human nature and behavior from the broad perspective of contemporary anthropology. Four primary subfields of anthropology, biology, cultural, linguistics, and archaeology discussed to integrate various aspects of the human condition.

ANTH 296 Topics (1-3)

ANTH 395 Independent Study (1-3)

ANTH 396 Topics (1-3)

ANTH 495 Independent Study (1-4)

ANTH 496 Topics (1-3)

APPLIED BUSINESS (ABUS)

ABUS 101 Budget Analysis (3)
Introduction to the basic elements and concepts of accounting, with emphasis on payroll, budgets, statements, and terms and accounting language.

ABUS 106 Marketing Your Image (1)
Exploration of skills students can use to market themselves to prospective employers, clients, professional groups, and audiences of all types. Major emphasis will be placed on skills used to gain employment (resumes, interview, and professional appearance), and to achieve continued personal success (professional behavior and attitude}. The course will include at least one simulated interview.

ABUS 114 Digital Layout (3)
Introduction to InDesign, a page layout program which integrates seamlessly with other Adobe design programs. InDesign delivers creative freedom and productivity to DTP. Class discussions and independent projects supplement hands-on classroom work.

ABUS 116 Principles of Supervision (3)
Introduction to the principles and techniques of supervising and motivating personnel. This course is designed for students who are interested in supervising others or for those currently in supervisory roles. Course content focuses on the human interaction in supervision.

ABUS 128 Workplace Behavior (3)
Exploration of the importance of effective commuinication in our personal lives, as well as in the world of business. Practical business applications such as employee motivation, handling customer complaints, and effectively resolving conflict in the workplace will be a major part of the curriculum.

ABUS 145 Data Management (3)
Exploration of a complete array of database skills, includes table, query, form, and report creation and modification. Other topics include application integration and automation of database tasks within the database.

ABUS 155 Social Media for Business (3)
Exploration of social media as a business strategy and how to match that strategy with the goals of the business. This course addresses current trends, ethics, regulations, legal challenges, strategy, content development, and change management. Students develop a better understanding of the similiarities and differences between social media marketing and traditional marketing.

ABUS 156 Problem Solving in the Business Environment (3)
Exploration of the problem-solving and decision-making processes. Those processes include: identifying decision elements, recognizing characteristics of good and bad decisions, practicing various approaches to decision making, utilizing a 9-step process for organization decision making, exploring the nature of problems, understanding situation factors, identifying problems, considering the human side of problem solving, and utilizing a 6-step problem solving process.

ABUS 160 Introduction to Customer Service (3)
Principles of customer service, including learning the relationship of self to customers, problem solving, and understanding the importance of communicating with customers. Specific emphasis is given to managing customer expectations by building customer rapport and creating positive outcomes.

ABUS 200 Business Rules and Regulations (3)
Introduction to the contemporary issues, theories, and principles used to effectively manage human resources. Topics include recruiting, hiring, compensation and benefits, training and development, employee relations, and legal issues.

ABUS 257 Managing Office Technology I (3)
Introduction to basic computer terminology, file management, and PC system components. Provides an overview of office application software including word processing, spreadsheets, and presentation graphics. Includes the use of a web browswer to access the internet.

ABUS 258 Managing Office Technology II (3)
Introduction to a wide range of uses of the electronic spreadsheet with special emphasis on using it as a business tool. Includes fundamentals and terms, creating and saving workbooks, entering and using formulas, formatting, printing, multiple-page workbooks, creating charts, entering and using functions, managing lists, and simple macros.

ABUS 289 Applied Business Capstone (3)
Exploration of presentation techniques, regarding both verbal and nonverbal skills. Demonstrate presentation techniques using supporting knowledge gained from current academic program.

ARCHAEOLOGY (ARKE)

✓ ARKE 205 Principles of Archaeology - GTSS3 (3)
Investigation of modern archaeology as an interdisciplinary anthropological science. Explores the objectives, methodologies and ethics of reconstructing prehistoric life.

ARKE 225 Introduction to North American Archaeology (3)
Survey of archaeology in North America, highlighting the Mississippi Mound builders, eastern cultures, Aztecs, and Maya. Development of archaeological theory and its application to the study of prehistoric sites in North America. Work with archaeological material curated at the Museum of Western Colorado.

ARKE 300 Human Evolution (3)
Surveys human biological and cultural evolution from the Pliocene to the Pleistocene. Covers paleontological, archaeological and behavioral approaches to our evolutionary history. Provides basic introduction to Darwinian natural selection. Prerequisites: ANTH 202 or ARKE 205.

ARKE 301 The Emergence of Human Culture (3)
Surveys human cultural evolution from the lower Paleolithic to modern hunter-gatherer communities using archaeological and ehtnographic approaches. Explores how our physiology and social behaviors are related to foraging. Prerequisites: ANTH 202 or ARKE 205.

ARKE 302 From Domestication to States (3)
Exploration of human prehistory from the end of the Pleistocene to the evolution of state-level political organization 5000 years ago. Examples are drawn from around the globe. Prerequisites: ANTH 202 or ARKE 205.

ARKE 320 Colorado Archaeology (3)
Surveys the prehistory of Colorado and adjacent portions of the Great Plains and Intermountain West from the Paleoindian era to the Protohistoric period. The focus will be on regional sequences and the major research questions. Prerequisites: ANTH 202 or ARKE 205.

ARKE 325 Geoarchaeology (3)
Introduction of aspects of geological science used to solve archaeological problems. Survey of the sub-fields of geology pertinent to archaeological data recovery, site formation processes, and site interpretation in the Mountain west. Includes aspects of physiography, geomorphology, Quaternary stratigraphy, geochemistry and mineralogy, and lithic materials identification. Prerequisite: ARKE 205 and GEOL 111/111L.

ARKE 350 Southwest Archaeology (3)
Prehistory and cultural background of the southwestern United States. Archaeological sites of Colorado, Utah, Arizona and New Mexico highlighted. Introduction to cultures inhabiting these areas for the last 5,000 years with emphasis on the Anasazi, Fremont, Uto-Aztecan and Athabaskan groups. Prerequisite: ARKE 205.

ARKE 352 Paleoindian Archaeology (3)
Multifaceted analysis of the controversies surrounding the colonization of the western hemisphere and the Pleistocene and early Holocene archaeology of North America. Prerequisite: ANTH 202 or ARKE 205.

ARKE 395 Independent Study (1-3)

ARKE 396 Topics: (1-3)

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

ARKE 402 Cultural Resource Management (3)
Introduction to the principles and practice of public archaeology. Topics include cultural resource legislation, project management, the National Register of Historic Places, and the federal and state offices in charge of managing archaeological heritage. Prerequisite: ARKE 205 and ARKE 225.

ARKE 410 Field Methods in Archaeology (3)
ARKE 410L Field Methods in Archaeology Laboratory (2)
Overview of contemporary methods of archaeological survey, site recordation, and excavation techniques. Artifact collection, interpretation, and analysis presented as is record keeping, artifact conservation, and curation. Topics include maps and mapping, geographic information systems (GIS), Global Positioning System (GPS), field and specimen photography, recovery and analysis of supplemental materials (macrobotanical, pollen, chronometric, etc.). Prerequisites: ARKE 205 and ARKE 225.

ARKE 466 Field Research in Archeology (6)
Exploration of modern archaeological practice. Over six weeks students will take part in archaeological field research including excavation, survey, mapping, and occasionally rock art recording. Field trips to significant western Colorado sites will be taken. Prerequisites: ARKE 205, ARKE 410, and ARKE 410L.

ARKE 496 Topics: (1-3)

ART – ANIMATION (ARTA)

ARTA 123 Lights! Camera! Action! (3)
Exploration of fundamental components of animation, digital filmmaking, and motion design. Students explore character design, styles of animation, digital filmmaking, and motion design while focusing on the elements of light, sound, and motion as key time-based design factors. Individual and group projects.

ARTA 222 Principles of Digital Photography (3)
Exploration of photographic principles through the use of the digital single lens reflex camera.

ARTA 223 Image and Motion (3)
Introduction to tools, techniques, and practices relating to images and time-based media. Integration of images, typography, digital film, and sound.

ARTA 224 Principles of Film and Motion Design (3)
Exploration of motion design and time-based visual imagery. Includes history of motion design, application of motion design as visual communication, and the integration of animation, film, images, typography, and sound. Current trends in motion design media and technologies. Prerequisites: ARTE 101, ARTE 102, and ARTS 151.

ARTA 225 Principles of Animation (3)
Introduction to the creation of animated works. Survey of animation principles, history, tools, and techniques. Additional focus on story development, storyboarding, and stop motion animation.

ARTA 296 Topics (1-3)

ARTA 322 Intermediate Photography (3)
Discovery of vision and the art of seeing through the lens of a camera. Prerequisites: ARTE 101 and ARTA 222.

ARTA 323 Character Design and Story Concepts (3)
Animators, filmmakers and motion designers tell stories. Stories have scripts, characters, props, and environments. This course is designed to guide students in developing their stories, characters and the related content. It is also an area of specialization within time-based media. Prerequisites: ARTA 223, ARTA 224, and ARTA 225.

ARTA 324 Two-Dimensional Animation and Motion Design (3)
Exploration of the creation of two-dimensional animation and motion design utilizing multilayered time-based compositions, compositing, special effects, puppet animation, and time manipulation. Additional focus on storytelling, storyboards, pre-production, production, and post-production. Prerequisites: ARTA 223, ARTA 224, and ARTA 225.

ARTA 325 3D Digital Modeling (3)
Exploration of the basics of 3D animation. Focus on modeling, texturing, lighting, cameras, animation, and rendering. Emphasis will also be on creative expression in these areas. Prerequisites: ARTA 223, ARTA 224, and ARTA 225.

ARTA 326 Digital Filmmaking (3)
Exploration of advanced motion design techniques. Manipulation of related audio, image, animation, typography, and visual effects. Focus on movement, cutting, shot selection, timing, rhythm, matching action, story arc, typography, choreography, light, and color. Historical progression of editing techniques. Production includes output to various web, mobile, or digital devices. Prerequisites: ARTA 223, ARTA 224, and ARTA 225.

ARTA 327 Sound Principles and Production (3)
Examination of techniques and applications of sound as a component of time and time-based media. Technical, historical, aesthetic, conceptual, recording, and editing issues will be explored in depth. Designed to introduce the student to some of the major modes of working with sound through projects that explore the relationship of sound to image. Prerequisites: ARTA 223, ARTA 224, and ARTA 225.

ARTA 396 Topics: (1-3)

ARTA 422 Advanced Photography and Studio Lighting (3)
Exploration of light and the development of a studio lighting portfolio. Prerequisites: ARTE 101, ARTA 222, and ARTA 322.

ARTA 424 Animation, Film, Photography and Motion Design Studio I (3)
Exploration of advanced individual projects in animation, film, photography and motion design. Students are encouraged to focus on advanced individual projects based on perfecting their personal interests and focusing on career goals. Prerequisites: ARTA 322, ARTA 323, ARTA 324, ARTA 325, ARTA 326 and ARTA 327.

ARTA 425 Animation, Film, Photography and Motion Design Studio II (3)
Continuation of ARTA 424. Students submit proposals for individual projects focusing on singular or combined work in animation, film, photography and motion design. Emphasis is placed on the professional presentation of finished projects. Prerequisite: ARTA 424.

ARTA 426 Advanced Motion Studio (3)
Development of emerging personal direction. Opportunities for unique, experimental, and personal projects working individually or in collaboration with other students. This course may be repeated for a maximum of six credit hours. Prerequisites: Upper division standing and consent of instructor.

ARTA 427 Portfolio and Demo Reel (3)
Preparation of demo reel, resume, and promotional materials for entry into the professional job market. Prerequisite: ARTA 424.

ARTA 496 Topics: (1-3)

ARTA 499 Internship (3)

ART – ART EDUCATION (ARTD)

ARTD 196 Topics: (1-3)

ARTD 296 Topics: (1-3)

ARTD 395 Independent Study (1-3)

ARTD 396 Topics: (1-3)

ARTD 410 Elementary Art Education Methods (3)
Explorations of theory, methods and materials for teaching art, kindergarten through sixth grade. Required for K-6 elementary teachers and K-12 Art Education majors. Studio applications, aesthetics, creative problem solving, art history, lesson and unit plans explored. Prerequisites: EDUC 115, EDUC 215, EDUC 343, all with a grade of "B" or higher.

ARTD 410L Field/Studio Experience in Elementary Art Education Methods (1)
Required for K-12 art education majors only. Forty field hours in local public schools. Co-requisite to ARTD 410. Prerequisites: EDUC 115, EDUC 215, EDUC 343, all with a grade of "B" or higher.

ARTD 412 Secondary Art Education Methods (4)
Seminar that covers theory, methods and materials for teaching art in middle and high schools, grades 7-12. Applies options in teaching through embedded field hours. Development of a year-long art curriculum. Required for K-12 Art Education majors. Prerequisites: EDUC 115, EDUC 215, EDUC 343, all with a grade of "B" or higher.

ARTD 495 Independent Study (1-3)

ARTD 496 Topics: (1-3)

ARTD 596 Topics: (.5-3)

ART – GENERAL (ARTE)

✓ **ARTE 101 Two-Dimensional Design-GTAH1 (3)**
The principles of form and function in two-dimensional design with emphasis on color theory and use. Two hours of lecture and two hours of studio per week.

✓ **ARTE 102 Three-Dimensional Design-GTAH1 (3)**
Introduction to principles of form and function in three-dimensional design with emphasis on materials, process, and craftsmanship.

✓ **ARTE 115 Art Appreciation-GTAH1 (3)**
Some of the hows, whys, and whos of painting, sculpture, and functional design in selected periods and places. This course is intended for non-art majors. Art majors should take ARTE 118 instead.

✓ **ARTE 118 History of Art, Prehistory to Renaissance-GTAH1 (3)**
Survey of the development of art from Prehistory up to the emergence of the Renaissance. Course focus will be the study of major monuments to gain an understanding of the important factors that defined the artistic production of each civilization and historic period.

✓ **ARTE 119 History of Art, Renaissance to Present-GTAH1 (3)**
Survey of the development of art from the Renaissance to the late 20th century. Course focus will be the study of major monuments to gain an understanding of the important factors that defined the artistic production of different historic periods.

ARTE 196 Topics: (1-3)

ARTE 294 Sophomore Seminar (3)
Development of intended personal direction for creative activity and scholarly work in upper division studio and art history courses. Honing creative critical thinking skills through formal analysis of artwork; art critiques; basic art theory and contemporary art concepts; developing the annual juried student art exhibition; fundamentals of matting, framing, basing, and portfolio development; woodshop safety; exposure to local and regional art scene; and exploring career options in art. Prerequisite: ARTH 220.

ARTE 296 Topics (1-3)

ARTE 395 Independent Study (1-3)

ARTE 396 Topics (1-3)

ARTE 494 Senior Seminar and Portfolio (3)
Examination of the current state of the studio arts and various career options

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through research, discussion, and practical application in the coordination of a required studio art exhibition. Includes development and presentation of a professional portfolio package including artist statement, resume, and web presence. Must enroll in the course during the spring semester in which the senior exhibition is presented. Each student must be working directly with a full time faculty member in their discipline to select work for their senior exhibition. Prerequisite: ARTE 294 with grade of "B" or higher.

ARTE 495 Independent Study (1-3)

ARTE 496 Topics (1-3)

ARTE 498 Studio Assistant and Teaching Aid (3)
Designed for the senior level artist. Gain experience in teaching by preparing demonstrations and performing in-studio maintenance of studio equipment. Taught in conjunction with 200-level classes and requires instructor permission. Prerequisite: Consent of instructor.

ARTE 499 Internship (3)
Placement in a gallery, art center, or museum setting. The student is expected to complete 135 clock hours. Prerequisite: permission of instructor.

ARTE 596 Topics (1-3)

ART – (ARTG)

ARTG 122 Design It! (3)
Exploration of design as the foundation of all the visual arts. Approaching design through a broad hands-on tactile experience.

ARTG 196 Topics: (1-3)

ARTG 201 Adobe Illustrator (2)
Introduction. Techniques for using vector-based drawing program explored through exercises to learn the application and features as used by graphic designers for print and electronic media.

ARTG 202 Adobe Photoshop (2)
Introduction. Techniques for using raster-based software for print, video, web and other multi-media applications.

ARTG 203 Adobe InDesign (2)
Techniques for using the program explored. Exercises to learn the application and features as used by graphic designers and professional publishers.

ARTG 215 Graphic Design I (3)
Basic use and operation of graphics computer, exclusively Macintosh, with focus on terminology, hardware, peripheral devices, system management, and software (systems and applications). Including establishment of operation files, job information files, information capture and placement, and maintenance.

ARTG 221 Graphic Design II (3)
Principles of design and layout techniques, including thumbnail, rough, and comprehensive layouts: work planning and preparation of artwork with focus on computer and hand generated images. Prerequisites: ARTE 101, ARTE 102, ARTG 215. Corequisite: ARTG 222.

ARTG 222 Illustration I (3)
Approaches to traditional and contemporary illustration. Materials will be introduced and developed for practical use. Prerequisite: ARTG 215. Corequisite: ARTG 221.

ARTG 296 Topics: (1-3)

ARTG 301 Digital Illustration (3)
Advanced creation of digital imagery focusing on visual content and composition in print and multi-media applications. Prerequisites: ARTG 215, ARTG 221, and ARTG 222.

ARTG 320 Letterforms and Typography (3)
Study of letterforms and typography including terminology, type style identification and design, use of type within a design, composition, copyfitting, and basic principles of pattern and spatial design. Prerequisites: ARTG 215 and ARTG 221.

ARTG 321 Advanced Typography (3)
Explore traditional and contemporary forms of typography and compositions through letterpress and hand rendering approaches. Prerequisite: ARTG 320.

ARTG 333 Illustration II (3)
Illustration techniques in context of contemporary materials and methods. Advanced use of materials. Prerequisites: ARTG 221 and ARTG 222.

ARTG 337 Illustration III (3)
Storytelling through traditional and contemporary illustration medium. Emphasis placed on developing concepts, execution and professional practices. Prerequisite: ARTG 333.

ARTG 338 Advertising Design I (3)
Exploration of the various graphic communication applications common to the promotion of products and services, including brochures, posters, mailers, package design, and other items designed for print. Emphasis will be placed on design processes, prepress print production and the history of advertising. Prerequisites: ARTG 301 and ARTG 320.

ARTG 339 Advertising Design (3)
Advanced exploration of the various graphic communication applications common to the promotion of products and services, including brochures, posters, mailers, package design, and other items designed for print. Emphasis will be placed on design processes, prepress print production and the history of advertising. Prerequisites: ARTG 301, ARTG 320, and ARTG 338.

ARTG 373 Screen Printing for Graphic Design (3)
Introduce concepts and techniques of screen printing within Graphic Design and Illustration. Become familiar with industry tools, equipment and processes. Prerequisite: ARTG 221.

ARTG 395 Independent Study (1-3)

ARTG 396 Topics: (1-3)

ARTG 401 Digital Painting (3)
Introduction to the language of digital painting. Fundamental skills

of proportion, perspective, and color mixing. Translating light and color into a digital space. Perceptual problem solving in the practical application of digital painting. Prerequisite: ARTG 301.

ARTG 405 Website Design (3)
Creation and development of well-designed and functional Web pages/sites to accommodate clients' promotional and business needs. Topics covered include software, creation of graphics, publishing, design theory for the Web, typography and promotion. Prerequisites: ARTG 301 and ARTG 320.

ARTG 406 UX Design (3)
Investigation, analysis and application of User Experience and emerging website design trends. Prerequisite: ARTG 405.

ARTG 421 Contemporary Letterpress (3)
Approaches to traditional and contemporary letterpress. Materials will be introduced and technique developed for practical use. Prerequisite: ARTG 221.

ARTG 437 Illustration IV (3)
Advanced illustration development focusing on concept, content, materials and techniques. Emphasis on individual artistic style and personal visual communication perception. Prerequisite: ARTG 337 or instructor permission.

ARTG 450 Identity Design (3)
Exploration of visual communication designed for public and private business and organization identity. Emphasis will be placed on the process of design and approaches to image generation for identity systems and standards. Prerequisites: ARTG 301 and ARTG 320.

ARTG 493 Portfolio Development (3)
Development of portfolio materials to be used for gaining employement. Emphasis placed on current industry professional practices including presentation formats, resume development, contracts and salary negotiations. Prerequisites: ARTG 405 and ARTG 406.

ARTG 495 Independent Study (1-3)

ARTG 496 Topics: (1-3)

ARTG 499 Internship (3)
Placement in an agency or corporate department to provide an enhanced transition from the classroom to the work setting through first-hand experience. The student is expected to complete 135 clock hours. Prerequisite: ARTG 450.

ART – ART HISTORY (ARTH)

ARTH 196 Topics: (1-3)

ARTH 220 History of Modern Art (3)
A general survey class of Western and non-Western art from 1750 to the 21st Century. The emphasis of this survey is on the major movements and civilizations, methods of analysis, historical and cultural context. Prerequisites: ARTE 101, ARTE 102, ARTE 118, and ARTE 119.

ARTH 296 Topics: (1-3)

ARTH 315 Nineteenth-Century Art (3)
Comprehensive survey of the major art movements of the nineteenth century: Neoclassicism, Romanticism, Academic Art, the invention of photography, Realism, Impressionism, Post-Impressionism, Symbolism, and Art Nouveau. Prerequisites: ARTE 118 and ARTE 119.

ARTH 316 20th Century Art to 1950 (3)
Foundations of modernism from Post-Impressionism through Surrealism through the study of major artists and art works and related manifestations including important theories of modern art, the modernist transformation of design aesthetics, and social and political reactions to modern art. Prerequisites: ARTE 118 and ARTE 119.

ARTH 317 American Art History (3)
Examination of art and artists of America from colonial times up to the present with attention to the role of the artist and the visual arts in American social experiment. Prerequisites: ARTE 118 and ARTE 119.

ARTH 318 Development of Contemporary Art (3)
Examination of art produced within the past 40 years with attention to the plurality of successful styles and subjects pursued by artists, the increasingly important role of the art critic and the contemporary art museum in interpreting trends, the impact of the commercial art market on the production and dissemination of contemporary art, and various experimental art forms developed by artists to counteract the influence of critics, institutions and commercial interests. Prerequisites: ARTE 118 and ARTE 119.

ARTH 319 Art of the American West (3)
Examination of the artist's encounter with the West as both real and imagined experience from the works of expeditionary artists of the early 19th century to recent large scale "earthworks" that transform the Western landscape. Emphasis on the works of the major 19th century protagonists of the heroic Western image as well as the important role of Santa Fe and other Western locations in the development of a Western art tradition. Prerequisites: ARTE 118 and ARTE 119.

ARTH 320 Symbolism to Surrealism: Art & the Subconscious (3)
Examination of artistic fascination with symbolic meaning and suggestive content as a vehicle to explore myth and the subconscious from the late 19th century through the 20th century. Focus on how symbolic meaning is conveyed through visual content and theories about the role of myth and subconscious imagery in artistic experience. Prerequisites: ARTE 118, ARTE 119, and ARTH 315.

ARTH 321 Gothic and Northern Renaissance Art and Architecture (3)
Architectural accomplishments of Gothic style and the revival and development of painting and sculpture

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from the Gothic period through the Renaissance in the North. Includes invention of oil painting, growth of realism and direct observation of the real world in art, and effects of the Protestant Reformation on artistic styles and content. Prerequisites: ARTE 118 and ARTE 119.

ARTH 322 Expressionism in 20th Century Art (3)
Expressionism in Germany during the early 20th century and its recurrence in the latter half of the 20th century. Visual language of expressionism as a distinctive style and the artistic goals of Expressionism that define a specific role for the artist in society. Prerequisites: ARTE 118, ARTE 119, and ARTH 316.

ARTH 323 History of Modern Architecture (3)
Modern architecture as a form of applied artistic expression. Examination of major stylistic developments in architecture and applied design from 19th century historically-inspired styles through 20th century innovations that transformed traditions of architectural design and the role of the architect in modern society. Prerequisites: ARTE 118 and ARTE 119, and ARTH 315 and ARTH 316.

ARTH 324 History of Graphic Design (3)
Exploration of the history of graphic design from the advent of writing through the digital revolution, focusing on development of design techniques and styles. Prerequisites: ARTE 118 and ARTE 119.

ARTH 325 Italian Renaissance Art History (3)
Explores origins, development, and end of Italian Renaissance. Late thirteenth to mid-sixteenth century. Emphasis on major works of sculpture, painting, architecture, and the artists responsible for their creation. Prerequisites: ARTE 118 and ARTE 119.

ARTH 326 Medieval Art: Early Christian to the Romanesque (3)
Explorations of Christian art through time and geographic regions. Emphasizes major works including sculpture, manuscripts, and architecture as well as the forces which shaped their creation and determined their meaning and significance. Prerequisites: ARTE 118 and ARTE 119.

ARTH 327 History of Western Architecture (3)
Explores beginnings of architecture in prehistory and traces development through time and geographic regions through the end of the Italian Renaissance. Emphasizes major works of architecture with discussions of form, function, and relation to other works of architecture. Prerequisites: ARTE 118 and ARTE 119.

ARTH 328 History of World Ceramics (3)
Comprehensive survey of historical ceramic production across the globe. Examination of the role ceramics has played in relation to art and culture of the world. Focus on typology and identification of ceramic objects from prehistory through the modern era. Prerequisites: ARTE 118 and ARTE 119.

ARTH 329 Maya Architecture & Ceramics (2)
Comprehensive survey of major Maya archaeological sites, Maya ceramics, and the social and political context of art within the Maya culture. Focus on symbolism of Maya religion in architecture and ceramics. Prerequisites: ARTE 118 and ARTE 119.

ARTH 330 Maya Architecture and Ceramics Field Study and Community Service Project (2)
On-site exploration of Maya archeological ruins in the Yucatan Peninsula of Mexico. Experiential learning of Maya art and archeology and the historic Maya culture through field study. Compilation of visual and personal accounts of site visits through documentation. Community service presentation of ceramic art and technique to Dual Immersion Academy students.

ARTH 395 Independent Study (1-3)

ARTH 396 Topics: (1-3)

ARTH 400 Criticism and Research: Theory and Method (3)
Introduction to the development of art history as a discipline and how art historians evaluate and interpret complex issues of style, form, content and theory in visual art. Structured discussion of historical art works studied in other upper division art history courses. Readings of seminal art historical theories and interpretive methodologies. Hands-on practice with library research tools. Completion of a fully researched term paper. Prerequisites: ARTE 118 and ARTE 119, ARTH 315 or ARTH 316 or permission of instructor.

ARTH 495 Independent Study (1-3)

ARTH 496 Topics: (1-3)

ARTH 499 Internship (1-12)

ART – STUDIO ART (ARTS)

ARTS 110 Digital Photography (3)
Exploration of digital photography through technical and creative skill development. Use of the digital single lens reflex camera.

ARTS 151 Foundation Drawing I (3)
Introduction to drawing with an emphasis on perceptual drawing. Perspective, light, shadow, form, volume, and mark-making strategies are explored, as well as an introduction to composition using a variety of media. Preparation for more advanced art classes.

ARTS 152 Foundation Drawing II (3)
Continuation of ARTS 151. Further development of drawing tecnniques, including objective and subjective drawing, using calligraphic line, gesture, and caged volume. Introduction to color in drawings. Introduction to contemporary drawing strategies. Prerequisite: ARTS 151.

ARTS 196 Topics (1-3)

ARTS 221 Metalsmithing (3)
Prerequisite: ARTE 102 or consent of instructor.

ARTS 231 Fibers Workshop I (3)
Introduction to fiber and fabric art forms, including creation of original weaving, felt and fabric collage, batik and other applications. Prerequisites: ARTE 101 and ARTS 151.

ARTS 241 Beginning Hand Building (3)
Introduction to the ceramic process using traditional materials and methods for hand formed ceramics objects. Involvement in clay from raw material through the glazing and firing process. Studio emphasis on technique and creative process.

ARTS 242 Beginning Wheel Throwing (3)
Beginning throwing processes. Creating vessels while learning the technique of shaping clay by throwing. Form and function explored. Initial firing process for bisque fire taught. Development of under-glaze and glaze techniques.

ARTS 251 Life Drawing (3)
Introduction to drawing the human figure. Issues of form, structure, volume, movement, composition, and expressive possibilities are explored and practiced. Prerequisites: ARTE 101 and ARTS 152.

ARTS 252 Mixed Media Drawing (3)
Artistic exploration of experimental media, dry and wet, and alternative media alone or combined on varied drawing surfaces to give dimension, texture and vitality to a drawing. Figure and still life are main subject matter for observational approach. Prerequisite: ARTS 251.

ARTS 270 Screen Printing I (3)
Introduction to concepts and techniques of screen print in a commercial and fine art environment. Includes multiple layer registration, CMYK process prints, linear printing with textiles, and secondary printing on 3D objects. Students will build their own portable press. Prerequisite: ARTE 101.

ARTS 274 Printmaking: Intaglio and Relief (3)
Introduces concepts and techniques of intaglio and relief printmaking processes. Includes non-acid and acid intaglio techniques such as drypoint, hard ground/line etch, soft ground, aquatint, multiple plate printing, a la poupee wiping, and chine-colle. Relief processes include linoleum cut and woodcut. Prerequisite: ARTS 151.

ARTS 291 Painting I: Intro to Painting (3)
Introduction to the language of painting through studio practice. Fundamental skills of color mixing and practical applications of painting and how they relate to perceptual problem solving. Focus on light and color and how it translates into pictorial space through observational painting. Prerequisites: ARTS 151.

ARTS 296 Topics: (1-3)

ARTS 321 Metalsmithing (3)
Prerequisites: ARTS 151 and ARTS 221.

ARTS 331 Fibers Workshop II (3)
Intermediate examination of several fiber or fabric applications. Prerequisite: ARTS 231.

ARTS 342 Throwing Workshop I: Intermediate T hrowing (3)
A continuation of the throwing process involving more complex vessels and techniques using lids, spouts, and pedestals. Assignment to firing teams for studio production for high fire clay. Prerequisite: ARTS 242.

ARTS 344 Throwing Workshop II (3)
Alteration of thrown vessels using several techniques, including wet shaping, leatherhard shaping, marks, incising, and stamping. Creating larger vessels using a two-piece technique. Kiln teams assigned for high firings. Develop and study glazes and empirical formulas. Introduction to basic molecular composition of raw materials. Prerequisite: ARTS 342.

ARTS 351 Drawing Workshop I (3)
Traditional and contemporary drawing processes and advanced compositional strategies. Perceptual, abstract, and conceptual ideas explored within the context of strengthening the artist's formal skills and idea development. Individual and group critiques ongoing. Prerequisite: ARTS 152.

ARTS 352 Drawing Workshop II (3)
Formal mastery of the visual language and development of a personal artistic direction. Critical thinking skills about individual artistic influences explored. Individual and group critiques ongoing. Prerequisite: ARTS 351.

ARTS 353 Visual/Conceptual Thinking (3)
Learning meaningful questioning. Engaging in creative problem solving. Assumptions about art questioned. Media selection is not limited; problems posed may be solved with 2D or 3D media. Prerequisite: ARTS 251.

ARTS 354 Intermediate Life Drawing (3)
Continuation of the study of the human figure through an exploration and practice of composition, form, structure, volume, movement, anatomy and drawing processes. Prerequisite: ARTS 251.

ARTS 360 Sketchbook (3)
The sketchbook as a primary medium for developing creativity and the artist's thought processes. Exploring exercises and field assignments for building an approach to keeping a sketchbook as a place for ideas and recording the artist's visual experience. Prerequisites: ARTE 101 and ARTS 152, or consent of instructor.

ARTS 362A Artists' Books (1)
Introduction to the art of making visual books, including book structure, binding techniques, and strategies for developing sequential imagery. Prerequisites: ARTE 101 and ARTS 152, or instructor permission.

ARTS 362B Artists' Books (1)
Continuation of the art of making visual books, including book structure, binding techniques, and strategies for developing sequential imagery. Prerequisites: ARTE 101 and ARTS 152, or instructor permission.

ARTS 362C Artists' Books (1)
Further exploration of the art of making visual books, including book structure, binding techniques, and strategies for developing sequential imagery. Prerequisites: ARTE 101 and ARTS 152, or instructor permission.

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ARTS 364 Figure Painting I (3)
Exploration of proportion, perspective and volume through painting from a model. Investigation of various techniques and conceptual development encouraged through use of oil or acrylic. Individual and group critiques. Prerequisites: ARTS 251 and ARTS 291.

ARTS 365 Painting II: Into Abstraction (3)
Exploration and experimentation with various techniques, materials, and alternative processes inherent to contemporary painting. Through this exploration of painting, students will begin to develop a direction of investigation and a conceptual framework for their own personal painting practice. Prerequisite: ARTS 151.

ARTS 366 Painting 2: Observational Painting (3)
Further exploration of observational painting through various techniques, materials, and processes inherent to contemporary observational painting. This course builds on the foundation of observational painting in ARTS 291 allowing students to further develop their observational painting skills. Prerequisite: ARTS 291.

ARTS 370 Printmaking: Lithography (3)
Introduces concepts and techniques of fine art lithography, including traditional stone lithography, aluminum plate lithography, and positive plate photo lithography. Black and white, multiple color, hybrid or combination prints, and chine-colle. Prerequisite: ARTS 152.

ARTS 371 Printmaking Workshop I (3)
Develop skills with intaglio, relief, and lithograph. Exploration of advanced techniques. May include multiple color printing processes, engraving, and collagraph. Work created will be matted. Prerequisites: ARTS 274 and ARTS 370.

ARTS 372 Printmaking Workshop II (3)
Exploration of printmaking media. Investigation of a printmaker of choice to develop critical thinking about personal artistic skills. Artwork created will be matted, shown in a public space, and documented digitally. Prerequisite: ARTS 371.

ARTS 384 Ceramic Sculpture Workshop I (3)
Creating in clay using various techniques and processes. Explorations with clay includes elements of the figure, representational and abstract, as well as 3D forms as pure sculpture. Artwork based and finished for professional exhibition. Independent work via student/professor contract. Prerequisite: ARTS 241.

ARTS 385 Summer Institute in Marble, Colorado (3)
Summer symposium at Marble/Marble Carving Symposium. Carve Colorado Yule Marble from the same quarries used in the Lincoln Memorial, the Tomb of the Unknown Soldier and other projects. A fee for the summer institute is in addition to Colorado Mesa University tuition and fees. Prerequisite: ARTT 270.

ARTS 387 Bronze Commissions: Workshop I (3)
Special bronze commissions and projects as a liaison project with schools or the community. Direct experience at creating art from inception to mounted sculpture. Presentations to respective clients, budgets, armatures, sculpting, molds, wax, investing, and finishing of the bronze. Basing of the sculptures complete the process. Prerequisite: ARTS 281.

ARTS 388 Ceramic Sculpture Workshop II (3)
Thematic concepts for the development of a BFA exhibition in clay explored. Student / Mentor consultation of utmost importance as the theme is developed. Independent work via student / professor contract. Art work based for professional presentation. Development of glazes including empirical formulas. Introduction to basic chemistry of the molecular composition of raw materials. Prerequisite: ARTS 384.

ARTS 391 Painting Workshop I (3)
Skills developed in painting media of choice. Exploring advanced techniques to develop individual artistic expression. Discussions of personal influences and historical context ongoing. Prerequisite: ARTS 291 or ARTS 365.

ARTS 392 Painting Workshop II (3)
Further investigation of techniques and material in individual painting medium. Personal artistic influences identified tools to aid individual artistic direction. Individual and group critiques are ongoing. End of semester artwork presented in public space and documented digitally. Prerequisite: ARTS 391.

ARTS 395 Independent Study (1-3)

ARTS 396 Topics: (1-3)

ARTS 421 Metalsmithing (3)
Prerequisite: ARTS 321.

ARTS 431 Fibers Workshop III (3)
Creating of advanced fiber and fabric artwork; examination of historical precedents. Prerequisite: ARTS 331.

ARTS 442 Kiln Construction (3)
Ceramics majors. Theory and practice of formulation of glazes utilizing minerals and oxides. Development of glazes includes empirical formula to a batch, batch to an empirical formula, and limit formulas. Basic chemistry of the molecular composition of raw materials. Background in ceramics required. Prerequisite: Consent of instructor.

ARTS 443 Throwing Workshop III (3)
Advanced problems in clay construction and design with an emphasis on the development of personal style. Develop skills to create thrown multiples in clay. Discussion of marketing and establishing a studio to create clay art. Prerequisite: ARTS 344.

ARTS 444 Throwing Workshop IV (3)
Exploration of thematic concepts for the development of a BFA exhibit in clay continued. Development of personal style on the potter's wheel including advanced alteration techniques. Independent work via student/professor contract to create body of artwork with professional presentation. Prerequisite: ARTS 443.

ARTS 451 Drawing Workshop III (3)
Senior level drawing. Develop drawings used in senior exhibitions and professional purposes. Exploration and analysis of what historical and contemporary context fits individual's style. Prerequisite: ARTE 352.

ARTS 452 Drawing Workshop IV (3)
Subject matter, form, and content are determined by the student under the guidance of the instructor. Ability to speak and write articulately about created artwork developed. Prerequisite: ARTS 451.

ARTS 453 Visual and Conceptual Thinking (3)
Advanced. Continuation of ARTS 353. Prerequisite: ARTS 353.

ARTS 460 Sketchbook II (3)
Individualized, professional visual and conceptual documentation for the fine artist and designer. Advanced students identify personal goals, explore sketchbook styles, develop compositional approaches, and research media and subject matter (including color) in recording visual experiences. Prerequisite: ARTS 360.

ARTS 464 Figure Painting II (3)
Advanced level exploration of the human figure in relation to conceptually based narrative paintings. Variety of media is encouraged. Students will use the model to develop a consistent body of work towards their BFA show. Individual and group critiques ongoing as well as discussion about individual concepts and direction. Prerequisite: ARTS 364.

ARTS 465 Mixed Media Painting (3)
Advanced level bridge between 2D and 3D mediums. Focus on manipulation of various materials to give textural vitality to a conceptually based body of work leading toward the BFA show. Individual and group critiques ongoing as well as discussion of individual concepts and direction. Prerequisite: ARTS 365.

ARTS 471 Printmaking Workshop III (3)
Research a printmaking technique that has not been introduced. Create a print and present the method. Develop a professional portfolio of artwork for senior exhibition and professional shows. Artwork created will be matted and documented digitally. Prerequisite: ARTS 372.

ARTS 472 Printmaking Workshop IV (3)
Technical refinement and conceptual development. Refining a personal direction for the artist's imagery. Artwork created will be matted and documented digitally. Prerequisite: ARTS 471.

ARTS 473 Printmaking Workshop V (3)
Creation of a mature and cohesive series of prints that demonstrate a solution or solutions to a creative problem posed by the individual. Artwork will demonstrate technical mastery and conceptual sophistication; student will provide a mature written artist statement and high-quality photo documentation. Oral critique where the artist verbalizes the context of their artwork within the contemporary art world. Prerequisite: ARTS 472.

ARTS 474 Throwing Workshop V (3)
Exploration of the potter's wheel to develop personal style in the throwing process. Independent work via student/professor contract. Body of work created for professional presentation. Prerequisite: ARTS 444.

ARTS 484 Ceramic Sculpture Workshop III (3)
Thematic concepts for the development of a BFA exhibit in clay continued. Independent work via student/professor contract. Artwork based for professional presentation. Prerequisite: ARTS 384.

ARTS 487 Bronze Commissions Workshop II (3)
Special bronze commissions and projects as a liaison project with schools or the community. Direct experience at creating art from inception to mounted sculpture. Presentations to respective clients, budgets, armatures, sculpting, molds, wax, investing, and finishing of the bronze. Basing of the sculptures complete the process. Continuation of a year-long project at the 400 level. Prerequisite: ARTS 387.

ARTS 488 Ceramic Sculpture Workshop IV (3)
General introduction to media, techniques, and history of ceramic art to create a deeper appreciation for the creative ceramics process. Further development of thematic concepts for the development of a BFA exhibit in clay. Independent work via student/professor contract. Prerequisite: ARTS 484.

ARTS 491 Painting Workshop III (3)
Workshop III continues development of professional portfolios of artwork used for senior exhibitions and other professional shows. Artistic influences explored. Oral and written communication skills developed in preparation for professional interaction. End of semester artwork documented digitally. Prerequisite: ARTS 392.

ARTS 492 Painting Workshop IV (3)
Technical refinement and conceptual development emphasized. Refinement of the artist's imagery. Ability to speak and write about work developed. End of semester artwork documented digitally. Prerequisite: ARTS 491.

ARTS 495 Independent Study (1-3)

ARTS 496 Topics: (1-3)

ARTS 498 Ceramic Sculpture Workshop V (3)
Further exploration of thematic concepts for the development of a BFA exhibit in clay. Independent work via student/professor contract. Artwork created for professional presentation. Prerequisite: ARTS 488

ART – SCULPTURE/STUDIO (ARTT)

ARTT 270 Sculpture I (3)
Introduction of technique and processes practiced in advanced sculpture courses. Basic welding, mold making, bronze casting and fabrication/construction using multimedia explored. Development of aesthetic concepts stressed and their successful applications. Projects conclude with group critiques.

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ARTT 371 Sculpture/Construction I (3)
Exploration of MIG welding, beginning metal fabrication techniques, woodworking and multimedia. Historical contexts. Aesthetic concepts stressed and projects conclude with group critiques. Prerequisite: ARTT 270.

ARTT 372 Sculpture/Construction II (3)
Introduction of advanced fabrication techniques and tools in steel, wood and multimedia. Advanced finishes and finishing techniques also introduced. Continued focus on historical contexts. Prerequisite: ARTT 371.

ARTT 380 Bronze/Casting I (3)
Bronze casting using the lost wax process and ceramic shell. Includes history, terminology, equipment, and procedure. Includes working in wax, sprueing the art, ceramic shell investment, technical-pouring procedures, devesting the shelled patina. Studio emphasis on technique and creative process ending in finished bronze sculpture. Prerequisite: ARTT 270.

ARTT 381 Bronze/Casting II (3)
Creating in wax using various techniques. Explorations in wax using representational and abstract forms. Advanced finishes and patinas introduced. Prerequisite: ARTT 380.

ARTT 471 Sculpture/Construction III (3)
Sculpting in steel, wood and multimedia. Introduction to forge work. Direction chosen based on interests in materials and processes taught in previous sculpture/construction courses. Independent work via professor contract. Prerequisite: ARTT 371.

ARTT 472 Sculpture/Construction IV (3)
Thematic concepts for development of a BFA exhibit explored. Independent work via professor contract. Prerequisite: ARTE 471.

ARTT 475 Sculpture Workshop I (3)
Continued focus on a student's individual BFA direction. Independent work via student/professor contract. Prerequisite: ARTT 472.

ARTT 476 Sculpture Workshop II (3)
Emphasis placed on finishing sculpture representative of BFA direction. Sculpture focused and finished for professional presentation, independent work via student/professor contact. Prerequisite: ARTT 475.

ARTT 480 Bronze/Casting III (3)
Creating in wax using various techniques including advanced mold making. Focus on history and dynamics of furnace building and foundry equipment manufacture. Prerequisite: ARTT 381.

ARTT 481 Bronze/Casting IV (3)
Thematic concepts for development of a BFA exhibit explored. Independent work via professor contract. Prerequisite: ARTT 480.

ARTT 483 Bronze Workshop I (3)
Continued focus on a students individual BFA direction. Independent work via student/professor contract. Prerequisite: ARTT 481.

ARTT 484 Bronze Workshop II (3)
Emphasis placed on finishing sculpture representative of the student's BFA direction. Sculpture will be focused and finished for professional presentation. Independent work via student/professor contract. Prerequisite: ARTT 483.

ARTT 496 Topics: (1-3)

AVIATION TECHNOLOGY (AVTN)

AVTN 101 Private Pilot Ground School (4)
Preparation for Private Pilot Airplane, Single Engine, Land-FAA Knowledge Exam.

AVTN 102 Private Pilot Flight (4)
Preparation in flight training for the Private Pilot Airplane, Single-Engine, Land FAA Practical Test, and completing requirements for the Private Pilot Certificate.

AVTN 111 Instrument Pilot Ground School (4)
Preparation for the FAA Instrument Rating Knowledge Exam.

AVTN 112 Instrument Pilot Flight (4)
Preparation in flight training for the Instrument Rating, Single Engine Airplane FAA Practical Test, and completing requirements for the Instrument Rating.

AVTN 140 Aircraft Systems (4)
Introduction to the basic mechanical systems and structural components of aircraft to supplement instruction received in flight training.

AVTN 196 Topics: (1-3)

AVTN 201 Commercial Pilot Ground School (2)
Preparation for the Commercial Pilot Airplane, Single Engine, Land FAA Knowledge Exam.

AVTN 202 Commercial Pilot Flight I (4)
The first of a two-part sequence of flight training in preparation for the Commercial Pilot Certificate, Airplane, Single Engine Land FAA Practical Test. Consists of the cross country aeronautical experience required for the Commercial Certificate.

AVTN 203 Commercial Pilot Flight II (3)
Preparation in flight training for the Commercial Pilot, Airplane Single Engine, Land FAA Practical Test, completing requirements for the Commercial Pilot Certificate.

AVTN 205 Mountain Flying Ground School (1)
Preparation of the unique aspects of flying in mountainous terrain and the additional knowledge and proficiency necessary for safe and efficient operation in mountain and high altitude terrain.

AVTN 206 Crew Resource Management (1)
Comprehensive classroom instruction coupled with Line Oriented Flight Training (LOFT) in a Flight Training

Device. Covers the knowledge, skills, and attitudes necessary to enhance safety and operate effectively as a member of an airplane/helicopter crew.

AVTN 207 Multi-Engine Ground School (1)
Preparation for the FAA Practical Test for Private or Commercial Pilot, Airplane Multi-Engine Land.

AVTN 208 Multi-Engine Flight (1)
Preparation in flight training for the Airplane, Multi-Engine Rating and completing requirements for this rating.

AVTN 211 Fundamentals of Instruction (2)
Preparation for the FAA Fundamentals of Instructing Knowledge Exam.

AVTN 212 Flight Instructor Ground School (2)
Preparation for the FAA Flight Instructor Airplane Knowledge Exam.

AVTN 213 Flight Instructor Flight (1)
Preparation of mastery in the areas of: Fundamentals of Instructing, Technical Subject Areas, Preflight Preparation and Lesson, Grand and Airport Operations, Take Offs and Climbs, Fundamentals of Flight, Stalls, Spins, Maneuvering During Slow Flight, Basic Instrument Maneuvers, Performance Maneuvers, Ground Reference Maneuvers, Emergency Operations, Approaches, Landings, and After Landing Procedures, by passing the FAA Practical Test for Flight Instructor Airplane, Single-Engine Land.

AVTN 218 ATC Procedures (4)
Preparation of IFR operations in the Air Traffic Control System, including: general procedures, terminal and IFR procedures, radar and non-radar environments, enroute procedures, and special and emergency procedures.

BIOLOGY (BIOL)

✓ BIOL 101 General Human Biology-GTSC1 (3)
✓ BIOL 101L General Human Biology Laboratory-GTSC1 (1)
Scientific method, ecology, pollution, drugs, reproduction, cancer, heart disease, nutrition, and selected body structure and function relationships. Labs will include required field trips. Can be taken for graduation or essential learning credit by biology majors who have completed no more than 10 hours in BIOL. Three lectures and one two-hour laboratory per week.

✓ BIOL 102 Plant and Animal Biodiversity-GTSC1 (3)
✓ BIOL 102L Plant and Animal Biodiversity Laboratory-GTSC1 (1)
Selected body structure and function relationships, genetic engineering, animal phylum relationships, evolution, plant growth and development. Labs will include dissections and some required field trips. Can be taken for graduation or essential learning credit by biology majors who have completed no more than 10 hours in BIOL. Three lectures and one two hour laboratory per week.

✓ BIOL 105 Attributes of Living Systems-GTSC1 (3)
✓ BIOL 105L Attributes of Living Systems Laboratory-GTSC1 (1)
Cell structure and function, cell energetics, biochemistry and genetics. Three lectures and one two-hour lab per week. High school chemistry recommended.

BIOL 106 Principles of Animal Biology (3)
BIOL 106L Principles of Animal Biology Laboratory (1)
Broad morphological, physiological, and ecological features of principal phyla of animals and relationships between them. Three lectures and one two-hour laboratory per week. Prerequisite: BIOL 105 or consent of instructor.

BIOL 107 Principles of Plant Biology (3)
BIOL 107L Principles of Plant Biology Laboratory (1)
Reproductive biology, anatomy, physiology, phylogeny and ecology of the major groups of plants. Three lectures and one two-hour laboratory per week. Prerequisite: BIOL 105 or consent of instructor.

BIOL 108 Diversity of Organisms (3)
BIOL 108L Diversity of Organisms Laboratory (1)
Broadly integrated survey of biological diversity with an emphasis on evolutionary relationships, ecology, and functional anatomical features of major groups. Three lectures and one two-hour laboratory per week. Corequisite: BIOL 108.

BIOL 113 Outdoor Survival (3)
Learning skills necessary for biologists working in the field, including wilderness survival, wilderness medicine, camping/climbing skills, edible/poisonous plants, urban survival skills, and epidemiological/radiation/chemical threats. Three one-hour lectures per week.

BIOL 196 Topics (1-3)

BIOL 203 Human Nutrition (3)
Introduction to the science of the effects of food on the body and the body's need for and utilization of essential nutrients.

BIOL 208 Fundamentals of Ecology and Evolution (3)
BIOL 208L Fundamentals of Ecology and Evolution Laboratory (1)
Introduction to current theory and experimental work on biology of populations, species interactions, community structure, organismal and molecular evolution, genetic structure of populations, and natural selection. Lab field trips and laboratory-based learning experiences in ecology and evolution. Prerequisites: BIOL 105, and BIOL 106 or BIOL 107 or BIOL 108 (may be taken concurrently).

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

BIOL 209 Human Anatomy and Physiology (3)
BIOL 209L Human Anatomy and Physiology Laboratory (1)
Study of the form and function of several major systems of the human body. For students with an interest in pre-med, nursing, human health, and biology. A background in general biology is recommended. Three lectures and two one and one-half hour laboratories per week.

BIOL 210 Human Anatomy and Physiology II (3)
BIOL 210L Human Anatomy and Physiology II Laboratory (1)
Continuation of Human Anatomy and Physiology, which covers additional body systems and disease processes. For students with an interest in pre-med, nursing, human health, and biology. Three one-hour lectures and two one and one-half hour laboratories per week. Prerequisites: BIOL 209 and BIOL 209L.

BIOL 211 Ecosystem Biology (4)
BIOL 211L Ecosystem Biology Laboratory (1)
Ecological studies utilizing the concepts of population biology: energetics, dynamics, distribution, and sociology. Overnight and/or weekend field trips may be required. Four lectures and one three-hour laboratory per week.

BIOL 217 Forensic Entomology (2)
BIOL 217L Forensic Entomology Laboratory (1)
Basic procedure and considerations in using insect evidence in crime scene investigations and the determination of post mortem interval using insects. Two-hour lecture and one two-hour lab per week.

BIOL 241 Pathophysiology (4)
Function of the human body with emphasis on interpretation of those functions in relation to disease processes. Prerequisite: BIOL 209 or BIOL 341.

✓ BIOL 250 Introduction to Microbiology-GTSC1 (3)
✓ BIOL 250L Introduction to Microbiology Laboratory-GTSC1 (2)
Major types of microorganisms with an emphasis on bacteria. Microbial taxonomy, structure, metabolism, genetics, and aspects of infectious disease and the immune host response. Three lecture hours and two two-hour laboratories per week.

BIOL 296 Topics (1-3)

BIOL 301 Principles of Genetics (3)
BIOL 301L Principles of Genetics Laboratory (1)
Principles of genetics at the organismal, cellular, and molecular level dealing with the genetics of prokaryotic and eukaryotic organisms and viruses. Three lectures and one three-hour laboratory per week. Prerequisites: BIOL 105 and MATH 113, BIOL 208 recommended.

BIOL 302 Cellular Biology (3)
Form, function, and bioenergetics of the cell. Prerequisites: BIOL 301 and CHEM 132.

BIOL 310 Developmental Biology (3)
BIOL 310L Developmental Biology Laboratory (2)
Embryonic growth and development of plants and animals. Also errors in normal development, cancer, aging, and related topics. Three lectures and two two-hour laboratories per week. Prerequisites: BIOL 301/301L or instructor consent.

BIOL 315 Epidemiology (3)
Characteristic patterns of communicable disease occurrence as related to individuals, geographic location, and time; factors affecting disease occurrence, the nature of vital statistics, sampling procedures, and study design. An independent project is required.

BIOL 316 Animal Behavior (3)
BIOL 316L Animal Behavior Laboratory (1)
Mechanisms and evolution of animal behavior. Three lectures and one two-hour laboratory per week. Prerequisite: BIOL 106 or BIOL 209. Corequisite: BIOL 316.

BIOL 320 Plant Systematics (3)
Systematic botany encompassing principles of classification, nomenclature, and evaluation of current classifications of angiosperms. BIOL 105, BIOL 107 or BIOL 108, and BIOL 208.

BIOL 321 Taxonomy of Grasses (2)
BIOL 321L Taxonomy of Grasses Laboratory (2)
A study of the grass family and grass-like plants (sedges and rushes) dealing with the evolution, classification, and identification of these plants. Two lectures and two two-hour laboratories per week. Prerequisites: BIOL 107 or BIOL 108, or consent of instructor.

BIOL 322 Plant Identification (2)
BIOL 322L Plant Identification Laboratory (2)
Identification of the local flora. Basic plant anatomy and morphology. Includes evolutionary relationships of major plant groups as well as environmental, ecological, and historical constraints on plant distribution. Prerequisites: BIOL 107 or BIOL 108.

BIOL 331 Insect Biology (3)
BIOL 331L Insect Biology Laboratory (2)
Insect taxonomy, evolution, ecology, and physiology. Insect collection required. Three lectures and two two-hour laboratories per week. Prerequisites: BIOL 106 or BIOL 108.

BIOL 333 Marine Biology (3)
Study of the principles that govern biological systems in the ocean with an emphasis on the natural history, ecology, and evolution of marine organisms. Three one-hour lectures per week. Prerequisites: BIOL 106 and BIOL 107, or BIOL 108, or consent of instructor.

BIOL 335 Invertebrate Zoology (3)
BIOL 335L Invertebrate Zoology Laboratory (1)
Study of the evolution, morphology, life history, ecology and classification of invertebrates with a focus on non-insect invertebrates. Three one-hour lectures and one two-hour lab per week. Prerequisites: BIOL 106, or consent of instructor.

BIOL 336 Fish Biology (3)
BIOL 336L Fish Biology Laboratory (1)
Study of the anatomy and physiology of fish. Topics include ecology, fish diseases, and marine and freshwater fishery techniques. Field trips may be offered. Prerequisite: BIOL 106 or consent of instructor.

BIOL 337 Criminalistics (3)
BIOL 337L Criminalistics Laboratory (1)
Offers a broad view of forensic techniques and subjects. Case studies of crimes and subsequent investigations discussed along with methodologies in evidence collection and analysis in modern crime laboratories as well as the limitations of such. Students use this course to narrow their field of interest and study. Prerequisites: BIOL 105/105L and CHEM 131/131L.

BIOL 341 General Physiology (3)
BIOL 341L General Physiology Laboratory (1)
Diversity of form and function across all vertebrates, including humans. Emphasizes fundamental physiological processes, integration among systems, and addresses physiological mechanisms adapted to environmental challenges. Three lectures and one two-hour laboratory per week. Prerequisite: BIOL 105 or BIOL 209.

BIOL 342 Histology (2)
BIOL 342L Histology Laboratory (2)
Microscopic study of tissues and organs. Two lectures and two two-hour laboratories per week. Prerequisites: BIOL 106 or BIOL 107 and consent of instructor.

BIOL 343 Immunology (3)
Immune system of animals with emphasis on human immune response. Includes the immune organs and both cellular and humoral responses. An independent research project is required. Prerequisites: BIOL 302, or BIOL 301 and BIOL 301L.

BIOL 344 Forensic Molecular Biology (3)
BIOL 344L Forensic Molecular Biology Laboratory (1)
Molecular biology and genetics used in forensic investigations, including the genetic basis of diversity and DNA typing techniques. Prerequisites: BIOL 105/105L and CHEM 131/131L.

BIOL 350 Microbiology (3)
BIOL 350L Microbiology Laboratory (1)
Growth, morphology, metabolism, genetics and ecology of microorganisms. Includes aspects of industrial microbiology, clinical microbiology, and genetic engineering. Three lectures and one three-hour laboratory per week. Prerequisites: BIOL 105, and CHEM 121/121L or CHEM 131/131L.

BIOL 371L Laboratory Investigations in Cellular and Molecular Biology (3)
Laboratory exercises and experiments that highlight important topics in cellular and molecular biology. The mechanics of laboratory science are introduced with an emphasis on modern techniques, hypothesis development, data analysis and scientific communication. Two three-hour laboratories per week. Prerequisites: BIOL 301 and CHEM 132 or consent of instructor.

BIOL 385 Nature and Philosophy of Science (3)
Central concepts on the nature of scientific knowledge including philosophical tenets that distinguish science from technology as well as distinguish science from pseudoscience. May not be used in the Additional Biology Courses categories for the Biology Concentration.

BIOL 387 Structured Research (1-3)
Independent research beyond the scope of the published curriculum. Designed for advanced sophomore and junior level students to participate in research activities under the direction of a specific faculty member. May be repeated for up to 6 credit hours. Prerequisites: sophomore or junior standing, or consent of instructor.

BIOL 395 Independent Study (1-3)

BIOL 396 Topics (1-3)

BIOL 403 Evolution (3)
Organismal and molecular evolution emphasizing its importance as the unifying theory in biology. Evolution of natural selection on genetic structure of populations. Prerequisites: BIOL 301, with BIOL 208 strongly recommended.

BIOL 405 Advanced Ecological Methods (3)
BIOL 405L Advanced Ecological Methods Laboratory (2)
Examination of quantitative methods in population, community, and ecosystems ecology. Extensive writing, computer work and field trips are required. Three lectures and two two-hour laboratories per week. Prerequisites: BIOL 105; and BIOL 106 and BIOL 107, or BIOL 108; STAT 311 is recommended.

BIOL 406 Plant-Animal Interactions (3)
Ecological, evolutionary, and applied approaches to the studies of herbivory, ant-plant interactions, pollination, and seed dispersal. Prerequisite: BIOL 105; BIOL 106, BIOL 107, or BIOL 108; and BIOL 208; BIOL 331 is recommended.

BIOL 407 Tropical Field Biology (3-5)
Field research techniques, ecology and natural history in lowland and montane tropical rainforests of Ecuador. Ten nine-hour labs and fifteen two-hour lectures conducted at biological field stations in Ecuador. Prerequisites: BIOL 105; and BIOL 106 and BIOL 107, or BIOL 108; and BIOL 208; BIOL 331 is recommended.

BIOL 408 Desert Ecology (3)
Overview of desert ecology in the surrounding area and in the United States. Covers ecology of U.S. deserts including specific plant, animal, and human adaptations. Discussion on world deserts. Field trips may be offered. Prerequisites: BIOL 208, and upper division standing or consent of instructor.

BIOL 409 Gross and Developmental Human Anatomy (2)
BIOL 409L Gross and Developmental Human Anatomy Laboratory (2)
Gross anatomy, embryology, radiological and cross-sectional

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anatomy of the human body via lectures, demonstrations, and dissections of the human cadaver. Emphasis on thorax, abdomen, and extremities. Two lectures and two 2-hour laboratories per week. Prerequisites: BIOL 209/209L, or consent of instructor.

BIOL 410 Human Osteology (3)
BIOL 410L Human Osteology Laboratory (1)
Study of the human skeleton, including osteology and bone detail, biological variation, animal skeletal comparisons, pathology, forensics, and proper handling of human skeletal material. Laboratory emphasizes analysis and identification of human skeletal material. Three lectures and one two-hour laboratory per week. Prerequisites: BIOL 209 and BIOL 209L.

BIOL 411 Mammalogy (3)
BIOL 411L Mammalogy Laboratory (1)
Classification, life histories, and ecology of mammals. Overnight and/or weekend field trips may be required. Two lectures and one two-hour laboratory or three-hour field trip per week. Prerequisites: upper division standing or consent of instructor.

BIOL 412 Ornithology (3)
BIOL 412L Ornithology Laboratory (1)
Classification and life history of birds, including field identification. Overnight and/or weekend field trips may be required. Three lectures and one two-hour laboratory or three-hour field trip per week. Prerequisite: upper division standing or permission of instructor.

BIOL 413 Herpetology (3)
BIOL 413L Herpetology Laboratory (1)
Classification, evolution, morphology and ecology of amphibians and reptiles. Overnight or weekend field trips may be required. Three lectures and one two-hour laboratory per week. Prerequisites: upper division standing or consent of instructor.

BIOL 414 Aquatic Biology (3)
BIOL 414L Aquatic Biology Laboratory (1)
Classification, life history, and ecology of aquatic animals. Overnight and/or weekend field trips may be required. Three lectures and one two-hour laboratory or three-hour field trip per week. Prerequisite: upper division standing or permission of instructor.

BIOL 415 Tropical Ecosystems (2)
Ecology of rainforests, grasslands, and desert ecosystems of the world. Prerequisites: BIOL 105, and BIOL 106 or BIOL 107, or BIOL 108, and BIOL 208, or consent of instructor.

BIOL 418 Wildlife Management (3)
Examination of wildlife biology and management. Topics covered include managing habitat, mammals, birds, fish, and other small animals. Three one-hour lectures per week. Prerequisites: BIOL 105 and BIOL 106 or BIOL 107, and BIOL 208.Corequisite: BIOL 418L.

BIOL 418L Wildlife Field Techniques (2)
Methods for using equipment in the field of wildlife and fisheries management. One one-hour laboratory and one three hour field trip per week. Prerequisite: Upper division standing or consent of instructor. Corequisite: BIOL 418

BIOL 421 Plant Physiology (3)
BIOL 421L Plant Physiology Laboratory (1)
Plant-water relationships, plant mineral nutrition, photosynthesis, plant growth and development at the molecular and cellular level to account for plant growth at the organismal level. Three lectures and one two-hour laboratory per week. Prerequisites: BIOL 107, CHEM 121 or CHEM 131, or consent of instructor.

BIOL 423 Plant Anatomy (3)
BIOL 423L Plant Anatomy Laboratory (2)
Form, variability, and structure of the tissues comprising the body of the higher plant. Three lectures and two two-hour laboratories per week. Prerequisites: BIOL 107 or consent of instructor.

BIOL 425 Molecular Genetics (3)
Nature and expression of genetic information at the molecular level in prokaryotic and eukaryotic organisms. Prerequisite: BIOL 301.

BIOL 426 Introduction to Electron Microscopy (2)
BIOL 426L Introduction to Electron Microscopy Laboratory (2)
History, theory and techniques of Electron Microscopy science. Some detailed knowledge of biology, histology, chemistry and physics is required to thoroughly and competently investigate selected specimens. Special attention will be paidto the operation of the microscope at Colorado Mesa University. Prerequisites: restricted to juniors and seniors with instructor approval.

BIOL 431 Animal Parasitology (3)
BIOL 431L Animal Parasitology Laboratory (1)
Common and important parasites of domestic animals and man. Ecology, epidemiology, diagnosis, and control are discussed with examples from the Protozoa, Trematoda, Cestoda, Nematoda, and Arthropoda. An independent research project is required. Three lectures and one two-hour laboratory per week.

BIOL 433 Marine Invertebrate Communities (3)
Techniques of collection and laboratory examination of marine invertebrates from intertidal and subtidal habitats. Seven eight-hour labs and seven two-hour lectures will be conducted at a marine biological research station. Prerequisites: BIOL 106, or consent of instructor.

BIOL 441 Endocrinology (3)
Anatomy and physiology of the endocrine system of vertebrates. Prerequisite: BIOL 105, CHEM 132 and junior or senior standing.

BIOL 442 Pharmacology (3)
Principles underlying absorption, distribution, metabolism, and excretion of drugs with emphasis on mechanisms of action and physiological responses. Prerequisite: BIOL 209 and 209L, one

year of chemistry, and junior or senior standing.

BIOL 450 Mycology (3)
BIOL 450L Mycology Laboratory (2)
Fungi, with emphasis on comparative morphology and development, classification, physiology, genetics, and ecological relationships. Importance of fungi in industry, agriculture, and medicine. Three lectures and two two-hour laboratories per week. Prerequisites: BIOL 107 or consent of instructor.

BIOL 482 Senior Research (2)
Designed to introduce students to appropriate procedures for conducting literature reviews, designing experiments, collecting and analyzing data, and preparing written and oral presentations of such experiments. Two lectures per week or equivalent. Prerequisites: senior standing, 2.80 GPA, and consent of instructor.

BIOL 483 Senior Thesis (2)
Students prepare an in-depth thesis elaborating on a major conceptual issue(s) in biology. The purpose of the thesis is to ascertain the student's ability to collect a broad array of information and integrate this into a logical conceptual framework that traverses organizational levels of living systems. The thesis topic must be approved by the instructor. Prerequisites: senior standing and consent of instructor.

BIOL 487 Advanced Research (1-3)
Provides students with an individualized research experience on a topic approved and directed by a specific faculty member. A detailed report in the form of a scientific journal article must be provided to the instructor. May be repeated for up to 6 credit hours. Prerequisites: BIOL 482 or consent of instructor; BIOL 387 is highly recommended.

BIOL 493 Lab Teaching Practicum (1)
Assist in laboratory teaching to support instruction and enhance student learning. May be repeated for up to 3 hours. Prerequisite: Junior or senior standing or consent of instructor. Must have taken the course to be supported or have sufficient experience in other related courses.

BIOL 494 Seminar (1)
Current problems, topics, and research procedures in biological sciences and medicine. Topics announced each semester. Prerequisites: sophomore standing and consent of instructor.

BIOL 495 Independent Study (1-3)

BIOL 496 Topics (1-3)

BIOL 499 Internship (1-10)
Work experience obtained on a job where assignments are primarily biological projects. The amount of credit awarded is determined by the school based on the nature of the assignment. Prerequisites: biology major, senior standing with either a 2.80 GPA in major courses, completion of BIOL 482, or consent of instructor.

BIOL 507 Tropical Field Biology (5)
Field research techniques, ecology and natural history in lowland and montane tropical rainforests of Ecuador. Ten nine-hour labs and fifteen two-hour lectures conducted at biological field stations in Ecuador. Prerequisites: Undergraduate degree in biology or undergraduate degree in another field with primary or secondary teaching experience in science, and instructor consent.

BIOL 533 Marine Invertebrate Communities (3)
Techniques of collection and laboratory examination of marine invertebrates from intertidal and subtidal habitats. Design and execution of a research project and a written paper are required. Seven eight-hour labs and seven two-hour lectures will be conducted at a marine biological research station. Prerequisites: Undergraduate degree in biology or a related field and instructor permission.

BIOL 596 Topics: (1-5)

BUSINESS (BUGB)

BUGB 101 Introduction to Business (3)
American business system operations in the economy, business functions, and interrelations between the businessman and his environment. Prerequisites: Can be taken for credit only by students who have completed fewer than 15 credit hours of BUGB, ACCT, HMGT, MANG, MARK, OFAD, CISB, or FINA courses.

BUGB 101A Introduction to Business: Part 1 of 3 (1)
Introduction to management, supervision, motivation, supervision and the processes of recruiting personnel in the workplace.

BUGB 101B Introduction to Business: Part 2 of 3 (1)
Introduction to marketing, pricing, quality customer service, social responsibility and ethics in the workplace.

BUGB 101C Introduction to Business: Part 3 of 3 (1)
Introduction to financial statements, financial management, and budgeting in the workplace.

BUGB 105 Freshman Business Seminar (3)
Overview of the Colorado Mesa University Business Department for prospective majors. Operational strategies and teamwork are developed via cases and projects. Students will gain exposure to all functional business areas through readings, discussions, and presentations. Cannot be taken for credit by students who have completed more than 15 credit hours of business courses.

BUGB 141 Business Mathematics (3)
Fundamental review of whole numbers, decimals, and fractions. Emphasis is placed on percentage applications to solving various business problems in the areas of buying and selling merchandise, inventory computations, interest computations on notes and savings, consumer credit and installment computation, home mortgage loans, and business depreciation computations.

BUGB 211 Business Communications (3)
Development of a non-defensive, supportive, communication system effectively applied to interpersonal and

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written transactions within the business organization. Prerequisite: ENGL 111.

BUGB 211A Business Communications: Part 1 of 3 (1)
Introduction to business communications, planning and writing messages and reports.

BUGB 211B Business Communications: Part 2 of 3 (1)
Introduction to effective communications in business, including presentations and routine, negative and persuasive messages.

BUGB 211C Business Communications: Part 3 of 3 (1)
Introduction to the roles of personal styles, cultures and teams in business communications.

BUGB 221 Insurance (3)
Common types of protection offered by insurance, including fire, theft, comprehensive, life, automobile, accident, and health. Emphasis on application of insurance to individuals and small business firms.

BUGB 231 Survey of Business Law (3)
Application of law as it applies to individuals and businesses including foundations of the American legal system, legal entities and government regulations, property law, contracts and sales, negotiable instruments, agency and employment law, torts, labor law, international business law and the social environment of business. No credit allowed for degrees from Department of Business if credit already established in BUGB 351.

BUGB 241 Income Tax (3)
Personal income tax, including filling out personal tax returns, exemptions, determining taxable income, adjustments to gross income, itemized deductions, rental income, depreciation, capital gains and losses. Not for students with an accounting emphasis.

BUGB 249 Personal Finance: The Business of Life (3)
Development of financial and economic literacy to improve personal decision making in the areas of: personal budgeting; developing a personal financial plan including consumer credit, taxes and purchasing a home; money and interest rates; the market economy; free enterprise and competition; and the consequences of externalities, public goods and increasing costs in the service sector.

BUGB 293 Cooperative Education (3-6)
Practical workplace experience under the joint supervision of the employer and the internship coordinator. Designed for non-business majors working in the business environment.

BUGB 349 Legal Environment of Business (3)
Legal framework of business including foundations of the American legal system, anti-trust law, property law, contracts and sales, negotiable instruments, agency relationships, torts, labor law, international business law and the social environment of business. Prerequisites: junior or senior standing or consent of instructor.

BUGB 351 Business Law I (3)
Law and legal reasoning. Court systems, constitutional law, business ethics, torts, criminal law, intellectual property, privacy, internet and cyber law. Contracts, sales, product liability, and agency and employment law.

BUGB 352 Business Law II (3)
Business entities (formation, financing and regulation). Securities law and corporate governance, negotiable instruments; creditors' rights and bankruptcy.; administrative, consumer and environmental law. Real and personal property; insurance; wills and trusts, and professional liability. Prerequisite: BUGB 351 or consent of instructor.

BUGB 393 Cooperative Education (3-9)
Cooperative Education internships provide non-business students an opportunity to put their education to practical use in the workplace under the joint supervision of an organization-based supervisor and a Colorado Mesa University faculty coordinator. Written consent of coordinator required prior to registration.

BUGB 395 Independent Study (1-3)

BUGB 396 Topics (1-3)

BUGB 401 International Business (3)
Current international topics in the disciplines of finance, management, and marketing. Concepts, analytical tools, and models are introduced to help explain the diversity and complexity of the international business environment. Prerequisite: senior standing.

BUGB 405 Big Questions in Business (3)
Application of the requisite business skill of critical thinking as it pertains to major issues in business. Prerequisite: Senior standing.

BUGB 435 Emerging Markets (3)
Traditional challenges to global product development and marketing in the world's emerging economies. Commonalities of differing regions and economic systems. Cultural and economic differences. A macro look at emerging economies. Micro applications of new emerging world markets. Prerequisites: Business Foundation Courses.

BUGB 440 Business Ethics (3)
Examination of the nature and role of ethics in the business environment.

BUGB 493 Cooperative Education (3-12)
See description of BUGB 393.

BUGB 495 Independent Study (1-3)

BUGB 496 Topics (1-6)

BUGB 500 Advanced Business Law and Ethics (3)
Emphasizes the regulations, statutes and cases that impact business on a daily basis. Topics covered include contract law, negotiations, labor law, the Uniform Commercial Code, and the

law of business organizations to include limited liability companies.

BUGB 510 Global Business (3)
Explores international management concepts and procedures and their importance to modern managers. Operating in multi-national, multi-cultural managerial environment, the modern manager must understand business and management from a global perspective. Emphasis is placed on comparing and contrasting management practices in different nationstates and how this might affect decisions concerning risk, investment, human resources, finances, operations, manufacturing and production in a multi-national business.

BUGB 520 Seminar in Current Business Topics (1-6)
Develops topics of current interest in the business world. Areas included are effective communication strategies, ethics, and the global dimension of business.

BUGB 530 Research Design (3)
Examines the design of research projects. Topics will include selection of the problem, secondary data, historical research, descriptive research, experimental research, the tools of research, and interpretation of data. Prerequisite: Permission of instructor and permission of MBA Director.

BUGB 590 Thesis I (3)
Prerequisite: BUGB 530 and consent of MBA Director.

BUGB 592 Thesis II (3)
Prerequisite: BUGB 590 and consent of MBA Director.

BUGB 595 Research Practicum (3)
Application of classroom theory and research methods to on-the-job experiences. Prerequisites: BUGB 530 and permission of the MBA Director.

CHEMISTRY (CHEM)

✓ CHEM 100 Chemistry and Society-GTSC1 (3)
Introduction to selected topics in chemistry with particular attention to chemistry in society. Minimal use of elementary mathematics is required.

✓ CHEM 121 Principles of Chemistry-GTSC1 (4)
✓ CHEM 121L Principles of Chemistry Laboratory-GTSC1 (1)
Introduction to fundamental principles of chemistry. Designed for students planning a major in science as well as students with a non-science major. Topics include atomic structure, bonding, periodic table, gas laws, mass relationships, solution theory, oxidation-reduction, electrochemistry, and ionic equilibrium. Four lectures and one three-hour lab per week. Prerequisite: mastery of high school algebra.

✓ CHEM 122 Principles of Organic Chemistry-GTSC1 (4)
✓ CHEM 122L Principles of Organic Chemistry Laboratory-GTSC1 (1)
Introduction to the chemical and physical properties of selected classes of organic compounds. Four lectures and one three-hour laboratory per week. Prerequisite: CHEM 121 or CHEM 131 or one year of high school chemistry and consent of instructor.

CHEM 123 Introduction to Environmental Chemistry (4)
Application of basic chemistry principles to the environment. Topics include aquatic and atmospheric chemistry, biogeochemical cycling of the elements required for life and structural organic chemistry as it applies to the physical and biological properties of persistent organic pollutants. Four lectures per week. Prerequisites: CHEM 121 and 121L.

✓ CHEM 131 General Chemistry I-GTSC1 (4)
Fundamental principles of chemistry. Designed for students planning a major in science. Topics include dimensional analysis, atomic and molecular structure, stoichiometry, simple chemical reactions, thermochemistry, and gases. Four lectures and one three-hour laboratory per week. Prerequisites: One year of high school chemistry, mastery of algebra, and a passing score on the chemistry assessment exam. CHEM 131 and 131L are prerequisites for CHEM 132 and 132L.

✓ CHEM 131L General Chemistry Laboratory I-GTSC1 (1)
Laboratory course to accompany CHEM 131. Designed for students planning a major in science. Basic chemistry laboratory techniques will be introduced. Experimental topics include: basic measurements and significant figures, determining the electronic structure of atoms, chromatography basics, determining empirical formulas, and calorimetry. Prerequisites: One year of high school chemistry, mastery of algebra, and a passing score on the chemistry assessment exam. CHEM 131 and 131L are prerequisites for CHEM 132 and 132L.

✓ CHEM 132 General Chemistry II-GTSC1 (4)
Continuation of the material in CHEM 131. Topics include states of matter, solutions, kinetics, equilibrium, thermodynamics, and electrochemistry. Prerequisites: CHEM 131/131L or CHEM 151/151L.

✓ CHEM 132L General Chemistry Laboratory II-GTSC1 (1)
Laboratory course to accompany CHEM 132. Designed for students planning a major in science. Freshman-level chemistry laboratory techniques will continue to be introduced. Experimental topics include: identification of chemical unknowns by qualitative analysis, colligative properties, acid-base titration, reaction kinetics, equilibrium contstant determinations, and electrochemistry. Four lectures and one three-hour laboratory per week. Prerequisites: CHEM 131/131L or CHEM 151/151L.

CHEM 151 Engineering Chemistry (4)
General chemistry for engineering majors. Topics include stoichiometry, thermodynamics, states of matter, acids and bases, oxidation-reduction, equilibrium, and kinetics. Examples

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and problems chosen to illustrate the application of chemistry to engineering. Prerequisites: MATH 113 or higher or concurrently enrolled in MATH 119, 135, or 151; CHEM 121 or a passing score on the chemistry placement exam.

CHEM 151L Engineering Chemistry Laboratory (1)
Laboratory course to accompany CHEM 151. Freshman-level chemistry laboratory techniques will be introduced. Experimental topics include basic measurement techniques, stoichiometry, chemical reaction observation, titrations, and reaction kinetics. Prerequisites: MATH 113 or concurrently enrolled in MATH 119, 135, or 151; CHEM 121 or passing score on the chemistry assessment exam.

CHEM 196 Topics (1-3)

CHEM 296 Topics (1-3)

CHEM 300 Environmental Chemistry (4)
Aquatic and atmospheric chemistry. Basic chemical, physical and biological properties of organic pollutants. Topics include smog formation, stratospheric ozone depletion, greenhouse gases, acid mine waste formation, biogeochemistry, and bioaccumulation of halogenated organics. Prerequisites: CHEM 122 or CHEM 132.

CHEM 301 Analytical Chemistry (3)
CHEM 301L Analytical Chemistry Laboratory (1)
Classical and instrumental methods of quantitative chemical analysis. Includes statistical treatment of experimental data, method characterization and validation, equilibrium, titrations, electrochemistry, spectroscopy, mass spectrometry, and chromatography. Prerequisite: CHEM 132/132L.

CHEM 311 Organic Chemistry I (4)
This course is the first semester of a two-semester introduction to basic organic chemistry. The nomenclature, structure, properties, and reactions of important classes of organic compounds are examined. The relationship of structure and bonding in organic compounds to reactivity is emphasized. Reactions are examined from mechanistic and synthetic perspectives. Prerequisites: CHEM 132/132L.

CHEM 311L Organic Chemistry Laboratory I (1)
This lab is the first semester of a two-semester sequence. It introduces common organic lab techniques (including chromatography, extraction, recrystallization, and distillation) used for separating and analyzing organic compounds. Prerequisite: CHEM 132.

CHEM 312 Organic Chemistry II (4)
This course is the second semester of a two-semester introduction to basic organic chemistry. The nomenclature, structure, properties, and reactions of important classes of organic compounds are examined. The relationship of structure and bonding in organic compounds to reactivity is emphasized. Reactions are examined from mechanistic and synthetic perspectives. Spectroscopic analysis of organic compounds is also introduced. Prerequisite: CHEM 132 or consent of instructor.

CHEM 312L Organic Chemistry II Laboratory (1)
This lab is the second semester of a two-semester sequence. Common organic lab techniques, including spectroscopy, are used to carry out and analyze organic reactions. Prerequisite: CHEM 132 or consent of instructor.

CHEM 315 Biochemistry (3)
CHEM 315L Biochemistry Laboratory (1)
Classical biochemistry concerned with the control of metabolism, the production of energy, the relationship of structure to function, carbohydrates, lipids, proteins, and nucleic acids. Three lectures and one three-hour laboratory per week. Prerequisite: CHEM 312/312L.

CHEM 316 Biochemistry II (3)
In-depth examination of fundamental biological processes including DNA replication, transcription, and protein synthesis. Skills for comparative genomics, protein visualization and sequence alignment developed. Prerequisites: CHEM 312 and CHEM 315.

CHEM 321 Physical Chemistry I (3)
Principles of chemical thermodynamics and kinetics. Includes study of the kinetic theory of matter, first and second laws of thermodynamics, state functions, thermochemistry, entropy, free energy, chemic potential, phase transitions, chemical equilibria, and the rates and mechanisms of chemical reactions. Prerequisites: CHEM 132 or CHEM 151; and MATH 152; and PHYS 111 or PHYS 131.

CHEM 322 Physical Chemistry II (3)
An introduction to the quantum theory of atoms, molecules, and chemical bonding for chemists. Includes principles of quantum mechanics and their application to atomic structure, molecular spectroscopy, symmetry properties, and the determination of molecular structure. Also introduces the principles of statistical mechanics with application to molecules. Prerequisites: CHEM 132 or CHEM 151; and MATH 253 (may be taken concurrently); and PHYS 111 or PHYS 131.

CHEM 341 Advanced Laboratory I (2)
Experiments from analytical, inorganic, organic, physical, and biological chemistry designed to show the application of theory to chemical problems. In addition to a list of possible core experiments, each student chooses other experiments according to individual interests. Two three-hour laboratories per week. Prerequisites: CHEM 301/301L; 312/312L; and CHEM 321. Corequisite: CHEM 442.

CHEM 351 Inorganic Chemistry I (3)
Study of periodic trends and bonding throughout the periodic table. Includes periodic properties, advanced electron-dot diagrams, VSEPR, symmetry, group theory, molecular orbital diagrams, electron counting, and basic nomenclature. Prerequisite: CHEM 312 (may be taken concurrently).

CHEM 352 Inorganic Chemistry II (3)
Application of periodic trends and high level bonding concepts to main

group, solid state, organometallic, and advanced coordination chemistries. Includes acid-base chemistry, donor-acceptor chemistry, crystalline solids, ligand field stabilization energy, Jahn-Teller Effects, pi-bonding ligands, reaction pathways at transition metal centers, and catalysts. Prerequisite: CHEM 351.

CHEM 395 Independent Study (1-3)

CHEM 396 Topics (1-3)

CHEM 397 Structured Research (1-3)
Chemical research guided by a faculty member. Sophomore through senior levels. May be repeated for up to 4 credit hours. Prerequisite: Permission of instructor.

CHEM 421 Advanced Organic Chemistry I (3)
Selected topics in organic chemistry are discussed in detail. Prerequisites: CHEM 312, 322.

CHEM 422 Advanced Organic Chemistry II (3)
Similar in content to CHEM 421, but without overlap in topics. CHEM 421 is not a prerequisite for 422. Prerequisites: CHEM 312, 322.

CHEM 431 Instrumental Analysis (3)
CHEM 431L Instrumental Analysis Laboratory (1)
Modern instrumental methods of analysis. Topics include signals and noise, atomic spectroscopy, molecular spectroscopy, electroanalytical chemistry and chromatographic separation methods. Three lectures and one 3-hour laboratory per week. Prerequisite: CHEM 301/301L.

CHEM 442 Communicating in the World of Chemistry (1)
Study and application of communication skills necessary for careers in chemistry-related fields. Includes laboratory notebooks, chemical publications, cover letters, resumes, and formal oral presentations. Corequisite: CHEM 341.

CHEM 487 Formal Research (1-3)
Chemical research guided by a faculty member. Results presented as a formal scientific paper in a format suitable for publication. Topics include laboratory notebooks, independent research, and formal reporting of research. May be repeated for up to 4 credit hours.

CHEM 494 Seminar (1)
Student, faculty, and other speakers present a variety of topics in chemistry and related fields. Prerequisites: Chemistry major with senior standing or consent of instructor.

CHEM 495 Independent Study (1-3)

CHEM 496 Topics (3)

CHEM 497 Structured Research (1-3)
Chemical research guided by a faculty member. Senior level. May be repeated for up to 4 credit hours. Prerequisite: Permission of instructor.

CHEM 596 Topics: (1-3)

CIVIL ENGINEERING (CIVE)

CIVE 127 Engineering Drawing for Civil Engineering (3)
Exploration of linetypes, symbols, and drawing and dimensioning standards by generating drawings using drafting instruments and computer-aided-drafting (CAD). Drawings start with basic sketching on the board and continue through 3-D solid modeling on CAD. Print reading includes interpretation of site, foundation, floor, and roof plans, as well as elevations and sections.

CIVE 212 Introduction to Geomatics (3)
Introduction to basic linear, angular, area, and volume field measurements common to civil engineering endeavors with application of GPS and GIS technology. Prerequisites: MATH 151 or MATH 135.

CIVE 313 Theoretical Fluid Mechanics (3)
Basic principles of fluid mechanics. Covers fluid properties, hydrostatics, fluid flow concepts, including continuity, energy, momentum, dimensional analysis and similitude, and flow in closed conduits. Prerequisite: ENGR 261.

CIVE 397 Structured Research (1-3)

COMPUTER-AIDED DRAFTING TECHNOLOGY (CADT)

CADT 101 Introduction to Computers (1)
Introduction to hardware and software including operating systems, word processing, spreadsheets, desktop publishing and presentation software.

CADT 105 Print Reading - Residential, Commercial, Industrial (3)
Reading and interpreting blueprints for residential, commercial, and industrial construction, including site plans. How to do a project take-off and project site layout.

CADT 106 Computer Aided Design (3)
Basic principles of computer aided design through the development of practical drawing problems using a computer. One one-hour lecture and two one and one-half laboratories per week. Corequisites: MAMT 105 and MAMT 106.

CADT 107 Advanced Computer Aided Design (3)
Advanced work in computer aided drafting principles including 2-D, 3-D, shading, etc. One one-hour lecture and two one and one-half hour laboratories per week. Prerequisites: CADT 106, or consent of instructor.

CADT 108 CAD - Mechanical (3)
Offers the student basic principles of computer aided drafting through the development of practical drawing problems using CAD software on the computer. One one-hour lecture and two one and one-half laboratories per week.

CADT 109 CAD-Mechanical Advanced (3)
Advanced work in computer aided drafting principles including 2-D and 3-D shading, solid based modeling and parametric modeling. One one-hour lecture and two one and one-half hour laboratories per week. Prerequisite: CADT 108.

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CADT 110 CAD Application (4)
This course offers the student an opportunity to apply skills and knowledge gained in earlier courses. The student will work on computer aided drawings relating to their career field of interest and advice of faculty. Internship or cooperative education may be substituted with approval of advisor. Two one-hour lectures and two one and one-half hour laboratories per week. Prerequisites: CADT 107 and CADT 109.

CADT 130 CAD-Civil (3)
Civil drafting will explore the aspects of current day mapping and topography, instruments, conventions and practices, contours, traverses, profiles, surveying, and photogrammetry through CAD drawings. Students will be introduced to GIS, graphical interface systems. One one-hour lecture and two one and one-half hour laboratories per week. Prerequisites: CADT 107 or CADT 109.

CADT 135 CAD Civil II (3)
Exploration of advanced aspects of current day mapping and topography. An in-depth instruction on road plan and profiles, cut and fill techniques and further instruction using skills from CADT 130. Prerequisite: CADT 130.

CADT 140 CAD - Architectural Theory (2)
Architectural theory will introduce the student to three major areas of architecture: basic structures and their design, building codes and career opportunities. Corequisites: CADT 141 and CADT 142.

CADT 141 Structural Materials (3)
This course will identify the properties and applications of the materials of industry. Codes, standards and testing will be emphasized in the fields of architecture. There will be an introduction to mechanical, electrical, plumbing and systems requirement. Corequisites: CADT 140 and CADT 142.

CADT 142 CAD - Residential Architecture (3)
Residential Architectural CAD will provide the student with a realistic residential project that will begin with schematic design and take him/her through to construction documents. Construction documents will include: site plan, floor plan, exterior elevations, foundation plan, floor framing plan, roof framing plan, building section, and a variety of construction details. One one-hour lecture and two one and one-half hour laboratories per week. Prerequisites: CADT 107 or CADT 109. Corequisites: CADT 140 and 141.

CADT 143 CAD-Commercial Architecture (3)
Commercial Architectural CAD will emphasize the creation of commercial project plans that will begin with schematic design and continue through to construction documents. Construction documents will include site plan, foundation floor slab plan, roof framing plan, building section and a variety of construction details. One one-hour lecture and two one and one-half hour laboratories per week. Prerequisites: CADT 107, and/or CADT 109, and CADT 140.

CADT 150 Advanced Images - Introduction to Animation (4)
Advanced work in computer aided drafting principles including 3-D renderings and animation techniques. One one-hour lecture and two one and one-half hour laboratories per week.

CADT 195 Independent Study (1-3)

CADT 196 Topics (1-3)

CADT 210 Project (3)
Exploration of advanced aspects of Computer Aided Design. Selected field project to develop more proficient understanding in 3-dimensional design. Final set of plans approved by and developed with faculty. Prerequisites: CADT 106, CADT 107, and CADT 108.

CADT 296 Topics (1-3)

COMPUTER INFORMATION SYSTEMS (CISB)

CISB 101 Business Information Technology (3)
Introduction to computing and software, including computing systems in a business environment and applicable software.

CISB 205 Advanced Business Software (3)
Use of electronic spreadsheets and database management software. Lectures, demonstrations, and hands-on projects. Developing customized applications with macros in spreadsheets. Creating tables, reports, forms, and queries to creating appropriate relationships and developing customized database software applications. Prerequisite: CISB 101 or permission of instructor.

CISB 206 Introduction to Business Application Programming (3)
Beginning programming with emphasis on solving problems in the context of business applications.

CISB 210 Fundamentals of Information Systems (3)
Exploration of information systems in a business environment. Use of information systems to improve business processes and organizational goals. Introduction to hardware, software, ethical issues, career opportunities, and organizational uses of information systems. Prerequisite: CISB 101 or CISB 205, or permission of instructor.

CISB 241 Introduction to Business Analysis (3)
Introduction to descriptive, predictive and inferential analysis techniques, data interpretation, business research skills, and techniques for analysis and modeling of business problems in the workplace, using appropriate software. Prerequisite: MATH 113 or higher, and CISB 101 or CISB 205 or CISB 305.

CISB 260 Information System Architecture (3)
Principles and applications of information systems hardware and systems software. Theoretical underpinnings, installation, configuration, and operation emphasized. Prerequisite: CISB 210.

CISB 295 Independent Study (1-3)

CISB 305 Solving Problems Using Spreadsheets (3)
Critical analysis and problem solving using tools in spreadsheets. Decision support utilizing spreadsheet tools covered by hands-on cases, book tutorials and lecture materials. Structured problems, semi-structured problems and what-if scenarios explored. Prerequisites: CISB 101 or CISB 205 or instructor permission.

CISB 306 Solving Problems Using Databases (3)
For students who have minimal background in databases. Assists in understanding the importance of data management in organizations through hands-on experience in solving business problems using relational database management software. Prerequisites: CISB 101 or CISB 210, or permission of instructor.

CISB 309 Enterprise Systems (3)
Theoretical and practical issues of enterprise systems within organizations. Demonstrates how enterprise systems integrate information and organizational processes across functional areas with a unified system comprised of a single database and shared reporting tools. Prerequisite: CISB 210.

CISB 310 Enterprise Architecture (3)
Enterprise IT solutions, applications, infrastructure and fit within business organizations. Prerequisite: CISB 309.

CISB 315 Information Systems Infrastructure (3)
Information systems infrastructure, computer architecture and communications networks in an organizational context. Prerequisite: CISB 210.

CISB 331 Advanced Business Programming (3)
Procedural and object-oriented software engineering methodologies using modern business languages. Emphasis on data definition and measurement, record and file processing, report generation and other traditional business information systems applications using modern methods of top-down, structured design. Other concepts include developing screen editors, abstract data types, and data structures including sequential, random and indexed files. Prerequisite: CISB 206 or CSCI 110.

CISB 341 Quantitative Decision Making (3)
Application of inferential statistics to realistic business situations; use of quantitative tools to enhance business decision-making ability. Descriptive statistics for data summarization, probability theory, distributions, estimation, and index numbers with emphasis on hypothesis testing, analysis of variance, regression/correlation, time series, and introduction to operations research and linear programming. Prerequisites: MATH 113 or higher, and CISB 241 or STAT 241.

CISB 392 Information Systems Theory and Practice (3)
Exploration and application of Information System theory for organizational success. Examination of managerial, user, and IS professional roles within information systems. Prerequisite: CISB 210.

CISB 393 Cooperative Education (3-12)

CISB 395 Independent Study (1-3)

CISB 396 Topics (1-3)

CISB 400 Data Communications and Network Management (3)
Exploration of modern telecommunication and networking technologies. Issues related to network media, including cost, design and management of LANs and WANs addressed. How networks and networking provide and enhance business communications. Networking standards, standards organizations, security, privacy, installation and configuration issues will be in classroom discussions with hands-on assignments. Prerequisite: CISB 260 or TECI 260.

CISB 410 Project Management (3)
Processes, techniques and tools of project management. Evaluating, initiating, planning, staffing, executing, controlling, and closing projects using project management software. Prerequisite: CISB 210 is a prerequisite or corequisite if the student has reached junior status.

CISB 442 Systems Analysis and Design (3)
Analysis and logical design of information systems. Practice in project management during team-oriented analysis and design of a departmental level system. Prerequisites: CISB 210, CISB 309, CISB 315 (may be taken concurrently), CISB 410, and CISB 206 or CSCI 110 or CSCI 111, or permission of instructor.

CISB 451 Database Administration (3)
Continuation of CISB 442 Systems Analysis and Design. Covers development and implementation of conceptual and detailed physical system design using proper database tools and methods. Prerequisites: CISB 205, CISB 442, and ACCT 202.

CISB 460 Electronic Commerce Systems (3)
Comprehensive examination of electronic commerce, how it is conducted and managed, and its opportunities, limitations, issues and risks. Coverage of technological infrastructure that supports e-commerce systems, plus the implications of such systems in the business environment. Exercises include exploration of e-commerce web sites and features, plus discussion and demonstration of state-of-the art e-commerce tools. Prerequisite: CISB 210 or permission of instructor.

CISB 470 Management of Information Systems (3)
Reviews the development of analyzing information use by organizations with different types of information systems. The conceptual foundations of information systems and the development, operation, management, uses, parties, control, structure, and impact of these systems will be addressed. Analysis and design of information systems is stressed through case study projects, emphasizing the role of computing in information

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systems and design of computer-based systems, expert systems, decision support systems and executive information systems. Prerequisites: Junior or senior status.

CISB 471 Advanced Information Systems (3)
Capstone course for the BS in CIS, the BAS in CIS, and the BBA IS concentration. Integrates management information needs, decision-making criteria, and design of interactive user interfaces. Design and development of computerized management control systems for major functional modules of an organization investigated, utilizing database management systems, distributed processing and structured systems development. Prerequisites: CISB 210, CISB 310, CISB 315, CISB 331, CISB 410, CISB 442, CISB 451, and CISB 470; or permission of instructor.

CISB 491 Directed Readings in Computer Information Systems (1-3)
Study of a leading edge topic within Computer Information Systems under direction of CIS faculty. Prior to registering, the student must meet with the CIS instructor to determine a topic and a method for reporting. For each credit hour registered, the student will read and report on at least 200 pages of scholarly readings. Prerequisites: CIS major, junior or senior status, and permission of instructor.

CISB 493 Cooperative Education (3-12)

CISB 495 Independent Study (1-3)

CISB 496 Topics (1-3)

CISB 500 Management of Information Systems (3)
Reviews the development of an overall framework for analyzing the use of information by organizations along with examples of different types of information systems. The conceptual foundations of information systems and the development, operation, management, uses, parties, control, structure, and impact of these systems will be addressed. The analysis and design of information systems is stressed through case study and projects, emphasizing the role of computing in information systems and design of computer-based systems, expert systems, decision support systems and executive information systems.

CISB 505 Advanced Project Management (3)
Processes, techniques and tools of project management. Evaluating, initiating, planning, staffing, executing, controlling, and closing projects using project management software. Projects, writing, and presentation to demonstrate mastery at the graduate level. Prerequisites: CISB 210 and permission of instructor.

CISB 560 Electronic Commerce Systems (3)
A comprehensive examination of the modern paradigm of electronic commerce, how it is conducted and managed, and its major opportunities, limitations, issues, and risks. Coverage of technological infrastructures that support e-commerce systems, plus the implications of such systems in the business environment. Exercises will include exploration of e-commerce web sites and features, plus discussion and demonstration of state-of-the-art e-commerce tools. Prerequisite: Graduate status at Colorado Mesa University.

COMPUTER SCIENCE (CSCI)

CSCI 100 Computers In Our Society (3)
The impact of computers on society and individuals; purpose and use of software integrated systems. Intended for students in disciplines outside the natural sciences and mathematics.

CSCI 104 Intro to Computer Hardware (1)
Computer hardware introduction. Includes purchase, maintenance and repair of computer hardware (desktops, laptops, servers and mobile devices, wired and wireless network hardware) in individual and corporate settings.

CSCI 106 Web Page Design I (3)
Aspects of Web page design such as HTML, Web servers, Web graphics/sound/video, and programs that automate the design of Web sites and scripts. Students will progressively develop their own sites throughout the term using software tools and concepts presented in the class. Prerequisites: Familiarity with Windows.

CSCI 110 Beginning Programming (3)
Introduction to computer programming. Includes syntax and semantics for sequential, selection, and repetition structures, program design and modularization simple and structured data types, and file I/O. Designed for majors outside the scientific disciplines. "Subtitle" indicates language of implementation. Prerequisites: MATH 110 or MATH 113 (either may be taken concurrently) or consent of instructor.

CSCI 110L Beginning Programming Laboratory (1)
An optional laboratory course to be taken as a co-requisite to CSCI 110. This lab is intended for those students currently enrolled in CSCI 110 who have little or no previous programming/computer experience. The student taking this course will complete several computer assignments designed to increase the student's knowledge of programming, debugging, and program design. "Subtitle" indicates language of implementation. Prerequisites: MATH 113 or consent of instructor. Corequisite: CSCI 110.

CSCI 111 CS1: Foundations of Computer Science (4)
Introduction to problem solving techniques with emphasis on modularity, abstraction, analysis, and correctness of algorithm design. Using C/C++ language as a tool, topics covered include data types, control structures, I/O, and functions. Prerequisite: MATH 113 (may be taken concurrently) or consent of instructor.

CSCI 112 CS2: Data Structures (4)
Continuation of CSCI 111 with emphasis on algorithm design and analysis, procedural abstraction, data abstraction, and quality programming

style. Topics covered include distinction between dynamic and static variables; various implementations of elementary stacks, queues, trees and lists; comparison of recursive and iterative algorithms; program correctness; and hierarchical design principles. Programming exercises will focus on modularity of design and data abstraction. Prerequisite: CSCI 111.

CSCI 130 Introduction to Engineering Computer Science (3)
Introduces the use of computers in engineering problem solving and elementary numerical methods. Learn programming fundamentals, including data and algorithm structure, and modular programming. Numerical methods learned include solving single, nonlinear equations, fixed-point iteration, Gaussian elimination, and linear regression. Prerequisite: MATH 135 (may be taken concurrently) or MATH 151 (may be taken concurrently).

CSCI 196 Topics (1-3)

CSCI 206 Web Page Design II (3)
A continuation of CSCI 106. Students will learn a scripting language and how to incorporate scripts in web page design. Prerequisites: CSCI 106 or permission of instructor.

CSCI 241 Computer Architecture and Assembly Language (4)
Architecture of a representative processor and its assembly language, introduction to hardware description language, register transfers and sequence control, realization of fetch, address, branch and execute cycles, start, stop and reset the computer, interrupt and memory mapped input-output, peripherals and interfacing. Prerequisite: CSCI 112.

CSCI 250 CS3: Introduction to Algorithms (3)
Complexity analysis and program performance; abstract data types such as lists, trees, stacks and queues; sorting; searching and hashing. Prerequisite: CSCI 112.

CSCI 296 Topics (1-3)

CSCI 305 Technology for Mathematics Educators (3)
Project- and activity-based introduction to technology resources appropriate for use by elementary mathematics educators. Focus will be on spreadsheets--programming, modeling, and data manipulation--supplemented with topics chosen from interactive geometry software, interactive applets, simple webpage design, educational simulations and games, and other mathematical technology tools. Prerequisites: MATH 113 and MATH 301.

CSCI 306 Web Page Design III (3)
Continuation of CSCI 206. Students will consider web site management issues, server-side scripting, security, and database interactions. Prerequisite: CSCI 206 or consent of instructor.

CSCI 310 Advanced Programming: (1-3)
Exploration of a higher level programming language for CSCI/CISB majors. Specifics will vary with the language covered. Prerequisite: CSCI 111 or CSCI 110.

CSCI 321 Assembly Language Programming (3)
Introduction to assembler, creating and executing assembly language program, organization of machine under study, data definition, addressing techniques, data movement instruction, branching instructions, flag and PSW registers, arithmetic instructions, macros and their implementation, hardware and software interrupts, storing instructions, typical applications. Prerequisite: CSCI 241.

CSCI 322 Embedded Systems (3)
Introduction to design of embedded systems. Topics include: basic computer electronics, embedded digital communications, and embedded software design. Prerequisite: CSCI 321.

CSCI 330 Programming Languages (3)
Principles and concepts which characterize various classes of high-level, computer programming languages are covered. Topics will include syntax and semantic issues, data types/classes, control structures, binding, and storage allocation. Prerequisites: CSCI 250.

CSCI 333 UNIX Operating Systems (3)
Introduction to systems programming with UNIX. Topics covered include elementary and advanced user commands, file handling, process control, library routines, device drivers, shell programming, and UNIX utilities. Prerequisites: CSCI 112 or knowledge of C++/C.

CSCI 337 User Interface Design (3)
Examination of user interface design (UID) principles. They include rules of perception, systems analysis, user analysis, good design principles, and testing and evaluation of designs. Using an appropriate Rapid Application Development tool, students will design a major project emphasizing UID concepts. Prerequisite: CSCI 250.

CSCI 345 Video Game Design (3)
Exploration of game engine and development theory. Emphasis is on rendering, physics simulation, artificial intelligence, and optimization techniques used in the modern game construction. Students will develop at least three games during the semester. Prerequisite: CSCI 112.

CSCI 370 Computer Security (3)
Networked-computer security, suitable for both CS and CIS majors. Topics include security framework, access control and site security, firewalls, attack methods, elements of cryptography and cryptographic systems, incidence response, security in e-commerce and e-mail, management and policy decisions for security. Prerequisites: CSCI 250 or CISB 400.

CSCI 375 Object Oriented Programming (3)
Advanced programming techniques using the object-oriented paradigm, with emphasis on abstractness of design, encapsulation, inheritance, and polymorphism. Additional topics include design tools and methodologies for determining classes, responsibilities, collaborations, and hierarchies. Prerequisite: CSCI 250.

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CSCI 380 Operations Research (3)
Methods of linear and dynamic programming, inventory and replacement models, queuing theory, game theory, PERT, CPM, and simulation. Prerequisites: MATH 152,STAT 200, and CSCI 111.

CSCI 393 Internship (1-3)
The internship course provides the student with the opportunity to apply classroom theory to on-the-job experiences. During the internship course, the student will work at approved professional positions related to the computer science field. The student will be required to write and fulfill course objectives with the approval of the internship coordinator. Prerequisites: Junior standing, written consent of internship coordinator.

CSCI 395 Independent Study (1-3)

CSCI 396 Topics (1-3)

CSCI 405 Mobile Application Development (3)
Application development on mobile platforms, such as smartphones and tablets. Topics include understanding hardware, application API's, marketplaces, and programming languages for these platforms. Prerequisites: CSCI 250, CSCI 337 or CSCI 206, or permission of instructor.

CSCI 420 Cyber Security (3)
Exploration of various common security flaws in programs and systems written in C and C++ programming languages. Topics include Linux commands, shell scripting, C, Buffer overflow, exploits, Man in the Middle attacks, and red and blue team exercises. Students will learn how to find various vulnerabilities such as buffer overlow and write simple exploits to take advantages of the vulnerabilities. Prerequisites: CSCI 241 and CSCI 370.

CSCI 445 Computer Graphics (3)
Introduction to the use of the computer to produce images: two and three dimensional graphics, algorithms and data structures for hidden lines and surfaces, shading, and reflections. Prerequisites: MATH 152 and CSCI 250.

CSCI 450 Compiler Structure (3)
Structures and techniques used in compiler writing are discussed with emphasis on scanners, symbol tables, parsers and code generation. The front end of a recursive descent parser is written for the semester project. Error analysis and code optimization are discussed as time permits. Prerequisite: CSCI 241. Corequisite: CSCI 330.

CSCI 460 Database Design (3)
Design and implementation of relational databases. Approaches and methods of design and normalization, SQL, integrity, and security will be discussed. Prerequisite: CSCI 250.

CSCI 465 Network/Application Security (3)
Exploration of advanced topics in network and web-based application security such as network vulnerability management, network monitoring, intrusion detection and prevention, government and industry security compliances, wireless security, most common web application security flaws, browser and database security principles, and authentication and authorization in web applications. Prerequisite: CSCI 420.

CSCI 470 Operating Systems Design (3)
Aspects of computer operating system design and implementation including memory management, processor management, device management, information management and performance evaluation methods. Some knowledge of C is required. Prerequisites: CSCI 250 and CSCI 241.

CSCI 480 Theory of Algorithms (3)
Techniques for analyzing time and space requirements of computer algorithms. Models are set up for analysis and techniques are applied to algorithms related to sorting and searching, pattern-matching, graph problems and other selected problems. The notion of NP-hard problems is introduced and related problems are discussed. Prerequisites: MATH 152 and CSCI 250.

CSCI 482 Theory of Computation (3)
Computability and automata theory introduced. Regular expressions, finite and pushdown automata, Turing machines, grammars and their relationship to automata, Church-Turing hypothesis, incomputable and undecidable functions and equivalence of computability models are covered. Prerequisites: MATH 369 and CSCI 250.

CSCI 484 Computer Networks (3)
Topics include: hardware technology for local and long haul networks, circuit and packet switching, interface between computer and network hardware, network architectures and protocols, routing, congestion and flow problems, queuing theory, and reliability issues. Instructors may choose to implement a sample network in which case the contents may be particularized to that network. Prerequisite: STAT 200.

CSCI 486 Artificial Intelligence (3)
Introduction to artificial intelligence programming with study of topics such as knowledge representation, expert systems, solution space search, non-deterministic algorithms (neural nets, genetic algorithms), etc. Programs will be written in a selected AI programming language such as Lisp or Prolog. Prerequisite: CSCI 250.

CSCI 490 Software Engineering (3)
Exploration of the philosophy of software engineering. Software project planning, requirement analysis, software system design and strategies, software design tools, program and system testing, system maintenance, and economics are examined. Prerequisites: CSCI 250 and CSCI 330.

CSCI 494 Seminar (1-3)
Discussions of specialized topics by students, faculty, or visiting professors. One or two one-hour meetings per week.

CSCI 495 Independent Study (1-3)

CSCI 496 Topics (1-3)

Certain courses are only offered during the fall or spring semesters, or may be available only in alternating years. It is the student's responsibility to meet with their advisor and/or check the two-year course planning calendar on the Colorado Mesa University website for course availability. Learn more at **coloradomesa.edu/academics**.

CONSTRUCTION MANAGEMENT (CONM)

CONM 181 Principles of Construction Management (3)
Construction industry practice emphasizing business organization and management techniques. Includes principles of management, organizational environments, decision-making, design, technology, leadership, and basic construction management with terminology, estimating and scheduling. This course replaces MANG 201 requirements for Construction Management majors only. It does not substitute for MANG 201 in any other way.

CONM 234 Graphic Communication for Construction Management (3)
Integrated approaches for developing plan reading skills and creation of visual communications, including 3D digital model and pictorial development using current industry software. Corequisite: CONM 181.

CONM 264 Mechanical/Industrial Systems (3)
Analysis and design understanding of specialty mechanical and industrial processes. Includes fundamentals of thermodynamics, fluids, control interface issues, system testing and commissioning. Emphasis on fundamental theory followed by proof of concepts through practicum. Lecture, lab and field exercises. Prerequisites: MATH 113, CONC 101, and CONM 181.

CONM 316 Construction Materials and Methods (3)
Materials and methods utilized in design and construction of vertical and horizontal projects. Course addresses proper construction methods and governing trade association standards. Sustainability and ethics relating to specification, ordering, and installation of construction materials incorporated. Prerequisites: CONC 101 and CONC 208.

CONM 340 Construction Estimating and Bidding (3)
Application of industry-recognized methods of construction estimating to compile conceptual systems and detailed estimates. Emphasis on students' ability to communicate estimate results in written and oral presentations. Prerequisite: CONC 228.

CONM 361 Advanced MEP Systems (3)
Electrical, heating, ventilation, air conditioning, plumbing, and fire suppression. Emphasis on design, operation, and interaction. Principles of codes, design, methods and materials as applicable to the construction industry included. Building system controls for smart buildings integrated in each component. Prerequisite: CONC 161.

CONM 362 Structure Analysis - Statics/Materials Strength (3)
Behavior of structural components and systems plus a broad overview of structural engineering analysis/design process. Principles of statics and strength of materials including properties of materials, forces, equilibrium, stresses and strains studied. Emphasis on understanding behavior of structural components associated with construction processes. Prerequisites: MATH 130 and PHYS 111/111L.

CONM 370 Managing Safety and the Regulatory Environment (3)
Impact of safety on the construction industry, in-depth discussions concerning application of O.S.H.A. Safety and Health Standards for the Construction Industry. Course emphasis on safety management training for jobsite supervisory personnel. Additionally, various regulatory requirements encountered in construction addressed. Prerequisite: CONC 101 and junior status.

CONM 380 Construction Project Management (3)
Exploration of the professional practices performed by the project team for successful job site management, including the relationship of project participants and methods of communication, evaluation of project objectives in decision making, relationship of different project contract delivery methods, and how to develop, understand, and use contracts for job site management. Prerequisite: CONM 340.

CONM 395 Independent Study (1-3)

CONM 462 Soil and Foundation Construction (3)
Properties of subsurface materials and principles of subsurface construction. Topics include soil classification and testing, soil mechanics, earthmoving operations and foundation systems from a contractor's perspective. Techniques of subsurface investigations and subsequent interpretation of soil reports studied to understand foundation construction methods and related field problems. Prerequisite: CONM 362.

CONM 472 Construction Planning and Scheduling (3)
Planning, scheduling and controlling construction operations. Emphasis on the planning phase of construction projects, logic diagrams, network-based scheduling techniques, and computer-assisted scheduling. Application of industry-recognized scheduling methodology to construction projects. Emphasis on communicating project schedules in written and oral presentations. Prerequisite: CONC 228.

CONM 475 Construction Company and Financial Management (3)
Exploration of concepts in starting, owning, and operating a construction company. The student engages in identifying the purpose, vision, values, short-term and long-term objectives, and execution plans of company. Accounting methods and systems are studied. Analysis of financial statements in developing budgets, projecting cash needs, and forecasting impacts of business decisions on profit. Prerequisites: CONM 380, FINA 301, and MANG 301.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

CONM 485 Construction Management Issues (3)
Issues facing the professional constructor. Integration of project management includes field study, research, case readings, problem solving, and project deliverables. Prerequisites: Senior status, and permission of instructor.

CONM 495 Independent Study (1-3)

CONM 496 Topics: (1-3)

CONM 499 Construction Internship (1-6)
University/construction industry partnership to provide real-life working experiences. The internship program's primary purpose is to prepare the construction management student with leadership responsibilities in a technologically oriented, diverse, dynamic and global construction environment. Prerequisites: CONM 380, and permission of instructor.

CONSTRUCTION TECHNOLOGY (CONC)

CONC 101 Construction Safety and Regulations (3)
Construction safety and its effect on productivity and employee morale. Application of basic principles of accident prevention. Complying with the various federal, state, and local laws governing safety (OSHA), hazardous chemicals, and drugs in the work place.

CONC 104 Architectural/Civil Print Reading (2)
Reading and hand-drafting prints as used in industry, application of that information to various architectural and civil industries.

CONC 116 Building Materials (3)
Introduction to building materials and methods commonly used today. Includes interior and exterior materials from foundations to roof systems.

CONC 117 Building Materials Testing (3)
Introduction to the properties and testing of materials used in today's construction projects. This includes wood products, metal, soil, aggregates, concrete, and asphalt. Prerequisites: CONC 116 or Instructor permission.

CONC 161 Building Mechanical/ Electrical (3)
Introduction to basic electrical, plumbing, heating, ventilation, and air conditioning systems found in residential and commercial building. Basic theory and design concepts included. Prerequisite: Instructor permission.

CONC 196 Topics (1-3)

CONC 208 Construction Equipment (3)
Basic understanding of general equipment and methods employed in different sectors of the construction industry. Areas covered are factors affecting the selection of equipment, rental versus ownership of equipment, estimating earthwork quantities, figuring equipment production, equipment management, and quality control of projects.

CONC 218 Surveying (3)
The fundamentals of modern plane surveying techniques and basic surveying instruments. Emphasis on construction-related aspects of surveying and the development of skills in using surveying field information. Prerequisites: MATH 107 or MATH 113.

CONC 228 Estimating and Cost Control (3)
The estimation process, the role of the estimator, types of estimation, CSI Divisions, bid/contract documents, change order pricing, value engineering, design build projects, and estimate compilation and cost controls. Prerequisites: CADT 105, CONC 116, CONC 161, CONC 208 or instructor permission.

CONC 234 Commercial/Industrial Plans (2)
Introduction to the commercial/ industrial construction industry. Processes, practices, and materials typically used in commercial/industrial construction will be studied.

CONC 245 Project Management (3)
Principles of project planning, scheduling, estimation and management. Emphasis on the basic skills required to supervise personnel including oral communication, problem identification, problem solving and decision-making. The course will also cover how to control productivity on the project. Prerequisites: CONC 228 or instructor permission.

CONC 251 Construction Prep: Codes, Permits (3)
Legal aspects including liens, contracts, bids, specifications, building permits and licensing, inspections and the Uniform Building Code. Introduces intra-trade coordination, remodeling and additions, construction practices, construction management and supervision.

CONC 265 Planning and Scheduling for the Construction Supervisor (3)
Planning the sequence, duration and relationship of activities for a construction process. Communicate the plan to contractual parties and to use the plan as reference point for examining project changes. Includes planning for safety, organization, manpower, problem solving, and site layout. Prerequisite: instructor permission.

CONC 270 Practical Applications (4)
Supplemental coursework with practical work experience related to educational program. Students will work under the immediate supervision of experienced personnel at the business location. Students will work on construction sites or projects related to their career field of interest with advice of faculty. Prerequisite: instructor permission.

CONC 296 Topics (1-3)

CRIMINAL JUSTICE (CRMJ)

CRMJ 110 Orientation to Criminal Justice Inquiry (1)
Foundations of criminal justice. Educational and career planning. Incorporation of APA writing skills for upper-division criminal justice courses.

Prerequisite: Must be a declared criminal justice pre-major.

CRMJ 196 Topics: (1)

CRMJ 201 Introduction to Criminal Justice (3)
Philosophy, history and development of the American criminal justice system. Survey of the role of law enforcement agencies, the courts, jails, prisons, probation and parole in both juvenile and adult systems. Prerequisite or Corequisite: CRMJ 110.

CRMJ 210 Emergency Dispatching (4)
Fundamentals of emergency dispatching. Includes basic principles of emergency communications operations and technology, call management and classification, legal aspects of dispatching, and stress management. Extensive practical training in police and fire emergency dispatching scenarios. Prerequisites: ENGL 111, CRMJ 201, and MATH 107 or higher.

CRMJ 296 Topics (1-4)

CRMJ 301 Criminal Procedure (3)
Analysis of landmark U.S. Supreme Court cases and their impact on operating procedures of law enforcement and the courts. Focuses on Fourth, Fifth, and Sixth Amendments to the U.S. Constitution. Prerequisites: CRMJ 110, CRMJ 201, CRMJ 310, CRMJ 320, CRMJ 328.

CRMJ 302 Ethics in Criminal Justice (3)
Examination of ethics in the criminal justice system from investigation, arrest, prosecution, defense, and corrections. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 310 The Police Process (3)
Basic features of policing in the United States. Police work, police organizations, police officers, and the critical problems facing policing today are examined in social and political context. Prerequisite: CRMJ 201.

CRMJ 311 Victimology (3)
Study of crime victims, their numbers, common characteristics, and roles they play in their own victimization. Legal, psychological, and social perspectives explored. Various theoretical explanations regarding both first-time and repeat victimizations discussed. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 315 Research Methods in Criminal Justice (3)
Research methods and their application to Criminal Justice. Prerequisites: CRMJ 310, CRMJ 320, CRMJ 328, MATH 110 or higher, STAT 215.

CRMJ 320 Corrections (3)
The role of corrections in the criminal justice system: history, guiding philosophies and theories, treatment approaches, custody issues, and supervision of offenders on probation and parole. Prerequisite: CRMJ 201 or consent of instructor.

CRMJ 325 Juvenile Justice and Delinquency (3)
Juvenile delinquency and juvenile justice in the United States. Comparative component involved. Focus on the nature and extent of delinquency, causes of delinquency, theoretical explanations, patterns of delinquency, and social reaction to delinquency. Prerequisites: CRMJ 310, CRMJ 320, CRMJ 328.

CRMJ 328 American Court Systems (3)
The American court system; local, state, and national, including consideration of the impact of prosecutors, defense personnel, judges, and other factors on court decisions and the criminal justice system. Prerequisites: CRMJ 201 or POLS 101.

CRMJ 330 Domestic Violence (3)
Exploration of intimate and domestic violence through a life-course perspective. Child abuse and neglect, intimate partner violence, and elder abuse and neglect considered. Criminal justice responses and prevention efforts critically examined. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 335 Community Policing (3)
Contemporary policing philosophy used and accepted by most policing organizations, domestic and foreign. Concept of community policing, history of the movement as well as the various issues in its adoption and implementation. Philosophy of community policing affecting both policing organizations and the community. Impact of community policing on crime, fear of crime, and the community in which utilized. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 340 Community Corrections (3)
Applied and practical approach to community corrections. Assessment, supervision, reintegration, and community partnerships emphasized. Special needs populations, unique issues and challenges, and insights into day-to-day experiences of various community corrections practitioners examined. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 360 Crime and Deviance (3)
Relationship between crime, deviance, and social control. Differences in definitions of criminal and deviant behaviors explored. Various criminological and sociological theories of deviance analyzed. Focus on relation to crime and social control. Societal response to deviance critically examined. Prerequisite: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 370 Criminology (3)
Major paradigms in the field of criminology and major contributions to the field in the U.S. and abroad. Emphasis on socio-historical development and philosophical movements that shaped criminological theory and its implications for criminal justice. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 375 Women and Crime (3)
Nature of criminality pertaining to women. How and why women are treated differently than males in the criminal justice system. Analysis of why women make up a small but growing portion of criminal offenders. Explores the ramifications of criminal activity on women. Possible solutions and alternatives to the unique issues of

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female offenders. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 395 Independent Study (1-3)
Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 396 Topics (1-3)
Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 405 Civil Liability for Law Enforcement and Corrections (3)
Overview of civil liability of law enforcement and correctional officers. Torts and civil rights remedies, the doctrine of respondeat superior, and chain of liability. Specific issues of use of force, failure to protect, searches and segregation, inadequate medical care, and negligence examined. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 410 Criminal Investigations (3)
Analysis of the investigative process and techniques employed in a contemporary criminal investigation. Considers theory and methodology of criminal investigation, and legal dynamics relative to achieving the major goals of an investigation. Use of practical and interactive experiences involves students in the investigative process by utilizing field exercises such as evidence collection and preservation, simulations related to crime scenes, surveillance activities, victim/suspect interviews and interrogations, and sound case preparation. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 412 Constitutional Law (3)
An analysis of American constitutional theory as articulated by the U. S. Supreme Court. Specific topics include the nature of judicial review, the powers of the President and Congress, federalism, the regulation of commerce and the development of substantive due process. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 415 Counter-Terrorism and Law Enforcement (3)
Emergence of modern terrorism and efforts to combat it. Strategies and systems involved in protecting against and responding to threats. Survey of major policies, practices, concepts, and challenges confronting practitioners in the complex field of counterterrorism and homeland security. Exploration of various issues facing law enforcement agencies in counterterrorism efforts. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 420 Criminal Law (3)
Philosophy, history and current state of criminal law with emphasis on analysis and application of Colorado Statutes and the American Law Institute Model Penal Code. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 425 Trial, Evidence and Legal Advocacy (3)
Development of written and oral advocacy skills through critical examination of legal issues, focusing on the interpretation of statutory laws and analysis of relevant case law to formulate sound, persuasive argument throughout the adversarial process. Considers trial procedure and the law of evidence. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 440 Capital Punishment (3)
Examination of the issues related to the death penalty in the United States, including the history of capital punishment, important Supreme Court decisions, the process of capital punishment, the comparative costs of incarceration and execution, miscarriages of justice in capital cases, and how the criminal justice system responds to these issues. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328, or consent of instructor.

CRMJ 465 Contemporary Issues in Criminal Justice (3)
Focused analysis of specific contemporary issues in criminal justice. Topics vary according to current events and instructor expertise. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 480 Inside-Out Prison Exchange (3)
Examination of issues involving crime and justice, the criminal justice system, corrections, and imprisonment through facilitated dialogue between students and current prisoners. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328, and consent of instructor.

CRMJ 490 Comparative Criminal Justice (3)
Capstone course. Includes survey of selected international criminal justice systems, including police, courts, and correctional components. International perspectives of policing, courts, and corrections examined to determine variations across countries. Topics of transnational crime, terrorism, and juvenile justice explored from a global perspective to determine if the United States significantly differs in methodology, intensity, and focus of public policy. Special emphasis placed on geographical, historical, and cultural perspectives that make the systems unique and/or similar to those in the United States. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 495 Independent Study (1-3)
Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 496 Topics (1-3)
Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRMJ 499 Internship (1-15)
Opportunities to apply theoretical principles in a structured organizational or work environment. Prior instructor and site approval required at least one semester in advance. Required clock hours dependent upon credit hours. Prerequisites: CRMJ 310, CRMJ 320, and CRMJ 328.

CRIMINAL JUSTICE: POST (CRJW)

CRJW 101 Basic Police Academy (6)
Conforms to POST standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning. Prerequisite: Permission of Academy Director.

CRJW 102 Basic Police Academy II (10)
Conforms to POST standards and state certification requirements as well as the basic skills and knowledge to perform the entry level duties of a peace officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning. Prerequisite: Permission of Academy Director.

CRJW 105 Basic Law (6)
Conforms to POST standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace officer. Emphasis will be on United States Constitution, arrest, search and seizure, interrogation and confessions, rules of evidence, Colorado Criminal Code, Colorado Traffic Code, Colorado Children's Code, Liquor Code and controlled substances. Prerequisite: Permission of Academy Director.

CRJW 106 Arrest Control (3)
Covers the skills, knowledge and abilities necessary to effectively maintain control of a suspect when making an arrest. Emphasizes the continuum of force and de-escalation of force. Prerequisite: Permission of Academy Director.

CRJW 107 Law Enforcement Driving (2)
Covers the skills, knowledge and abilities required for operation of a law enforcement vehicle. Emphasizes defensive driving. Enables students to demonstrate skills by driving a vehicle under simulated conditions. Prerequisite: Permission of Academy Director.

CRJW 108 Firearms (3)
Discusses the skills, knowledge and abilities necessary to safely use police firearms. Students will demonstrate skills by firing weapons on a firing range. The student will demonstrate basic safety techniques and will explain the firearms role within the continuum of force. Prerequisite: Permission of Academy Director.

CRJW 210 Emergency Dispatching (4)
Introduction to the basic fundamentals of emergency dispatching, to include basic principles of emergency communications operations and technology, call management and classification, legal aspects of dispatching, and stress management. Extensive practical training in police and fire emergency dispatching scenarios. Prerequisites: ENGL 111, MATH 107 or higher, CRMJ 201, and consent of instructor.

CRJW 270 Homicidal Drowning Investigations (2)
Homicidal Drowning Investigations - The approaches to water related death investigations. Exploration of the crime scene. Prerequisites: POST association, or Criminal Justice Major, or Law Enforcement, or Forensic study, or Fire Service, or Emergency Medical Services, or instructor's permission.

CRJW 280 Public Safety Diving Phase 1 (4)
Public safety diving environments. The formation of responsible scuba diving practices. Includes Basic Open Water Scuba Certification and protection from contaminated working environments. Prerequisites: POST association, or Criminal Justice major, or Fire Service or medical evaluation, or physically fit or instructor's permission.

CRJW 290 Underwater CSI (2)
Underwater crime scene investigations. Operational development of underwater crime scene investigations. Operational protocol with public safety diving hazards. Proper evidence mapping and securing underwater crime scenes. Prerequisites: CRJW 280, medical evaluation, physically fit, or instructor's permission.

CRJW 296 Topics (1-4)

CULINARY ARTS (CUAR)

CUAR 101 Food Safety & Sanitation (2)
Exploration of the basic rules of sanitation, food-borne illnesses, safe food temperatures, and safe food handling techniques.

CUAR 115 Introduction to Sustainable Cuisine (3)
Impact of human food production systems on environment and society. Focus on meeting present food needs without compromising future generations. Topics include connections among agriculture, food production, ecology, ethics, nutrition, health, cuisine and foodservice operations.

CUAR 120 Wine and Spirits (2)
Examination of types of beverages and equipment including wines, beers, and spirits. Profitability, marketing, federal and local laws, and service will be discussed. The history of making and processing wines, spirits and beers will be studied.

CUAR 121 Introduction to Food Production (1)
Fundamental principles of commercial kitchen operations.

CUAR 122 Introduction to Hot Foods (1)
Fundamental principles of stocks, soups, sauces, gravies, and products in the kitchen.

CUAR 123 Introduction to Garde Manger (1)
Fundamental principles of cold foods and non-alcoholic beverage preparation.

CUAR 124 Food Production Applications (1)
Basic cooking principles and practices in the production of stocks, soups, sauces and gravies, and vegetables, starches, fruits, salads, and dressing.

CUAR 125 Introduction to Foods (4)
Exploration of fundamental principles and practices of a commercial kitchen, including the organization of work, and basic cooking methods. Corequisite: CUAR 101 or permission of instructor.

CUAR 129 Center of the Plate (4)
Provides the basic methods for preparation and cooking of a variety of complete meals in a commercial

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kitchen. Corequisite: CUAR 125 and CUAR 101 or permission of instructor.

CUAR 131 Vegetables, Starches, Pastas, Breakfast and Short Order Cookery (1)
Preparation of vegetables, starches, breakfast and grilled items.

CUAR 132 Center of the Plate: Meat (1)
Preparation of a variety of meat dishes.

CUAR 133 Center of the Plate: Poultry, Fish (1)
Preparation of a variety of seafood and poultry dishes.

CUAR 134 Food Production Applications (1)
Practical application of food production techniques related to courses CUAR 121, CUAR 122, CUAR 123, CUAR 134, CUAR 131, CUAR 132, and CUAR 133. Prerequisite: CUAR 124.

CUAR 141 Basic Baking Principles and Ingredients (1)
Fundamentals of baking terminology, principles of baking, and the characteristics and functions of the main ingredients used in bakery production.

CUAR 142 Basic Yeast-Raised Products and Quick Breads (1)
Application of basic yeast-raised baking principles.

CUAR 143 Cakes, Pies and Pastry, Cookies (1)
Application of basic cake, pie, pastry, and cookie production.

CUAR 144 Baking Applications (1)
Application of basic baking principles and production.

CUAR 145 Introduction to Baking (4)
Exploration of basic baking principles, the characteristics and functions of ingredients, and production techniques for a variety of baked goods in a commercial kitchen. Corequisites: CUAR 125 and CUAR 129.

CUAR 150 Baking: Decorating and Presentation (3)
Introduction to techniques and equipment used in the modern bakery to produce, decorate and present pastries and desserts using a variety of products. Prerequisite: CUAR 145.

CUAR 151 Intermediate Bread Preparation (3)
Examines techniques and equipment used in the modern bakery to craft traditional and artisanal yeast breads using a variety of commercial and pre-ferment/wild yeast leavening methods and production techniques. Prerequisite: CUAR 145.

CUAR 152 Individual Fancy Desserts Production (3)
Preparation and decoration of individual dessert items using production techniques and equipment used in commercial bakeries to craft traditional and modern pastries, tarts, petite fours and cookies. Prerequisite: CUAR 145.

CUAR 153 Confectionaries and Petit Fours (3)
Introduces the art of advanced pastry skills utilized to craft specialty items such as chocolates, candies and confections, marzipan and pastiallage sculpture, and petit fours. Prerequisite: CUAR 145.

CUAR 156 Nutrition for the Hospitality Professional (3)
Fundamentals of nutrition as they apply to the food service industry.

CUAR 160 Cake Decorating (5)
Variety of cake decorating techniques including flowers, leaves, borders, and attractive arrangements. Preparation of and work with gumpaste, rolled fondant and airbrushing techniques. Prerequisite for CUAR 163. Prerequisites: CUAR 101 and CUAR 145.

CUAR 163 Advanced Wedding Cakes (3)
Refinement of skills in the creation of specialty cakes. Wedding cakes and other tiered cakes for special events. Prerequisites: CUAR 145 and CUAR 160.

CUAR 179 Wines, Spirits and Beers (3)
Explores production, marketing and service of wines, spirits and beers from around the world. Includes local and regional craft wine, spirit and beer production. Covers profitability, marketing, federal and local laws, identification of equipment, glassware, and staffing. Service Safe Alcohol certification exam administered.

CUAR 190 Dining Room Management (4)
Explores service related skills common to the "front of the house" through hands-on training in a restaurant dining room. Prerequisite: permission of instructor. Corequisite: CUAR 233.

CUAR 196 Topics: (1-3)

CUAR 220 Fundamentals of Healthy Cooking (3)
Application of theory and production techniques required to prepare and serve foods that emphasize the importance of a healthy diet, promote beneficial eating habits, and encourage personal enjoyment of cooking and eating.

CUAR 233 Advanced Line Prep and Cookery (4)
Preparation of complete meals to order. Emphasizes cooking "center of the plate" items such as meat, fish, seafood, and poultry in a commercial kitchen. Prerequisites: CUAR 125, CUAR 129, and CUAR 145, or permission of instructor. Corequisite: CUAR 190.

CUAR 236 Advanced Baking (3)
Refinement of skills in the creation of breads and pastries, dessert garnishes and accompanying sauces, and specialty dessert products. Prerequisite: CUAR 145.

CUAR 245 International Cuisine (3)
Introduces full meal preparation of a variety of international cuisines. Ethnic ingredients and meals from the Mediterranean, Latin America, Southeast Asia, India, China, and Japan will be introduced. Prerequisites: CUAR 101, CUAR 125, and CUAR 129.

CUAR 251 Advanced Garde Manger and Hors D'Oeuvres (3)
Introduces the student to a broad array of both hot and cold hors d'oeuvres and appetizers. Students learn to prepare various ethnic hors d'oeuvres including tapas, antipasta, sushi, classical and contemporary canapes as well as show mirrors and platters. Prerequisites: CUAR 101 and CUAR 125.

CUAR 255 Supervision in the Hospitality Industry (3)
Skills necessary for creating a goal-oriented environment utilizing management principles in the hospitality industry.

CUAR 261 Cost Controls (3)
Explores the costs usually found in the food service industry and the techniques used to control them.

CUAR 262 Purchasing for the Hospitality Industry (3)
Explores the purchasing, selection, and procurement of food and supplies in the hospitality industry.

CUAR 269 Dietary Baking (3)
Examines techniques and equipment used to produce high quality bakery products that address the issue of common food allergens and intolerances. Prerequisites: CUAR 145 and CUAR 156.

CUAR 271 Techniques of Culinary Competition - Hot Food (3)
Fundamental principles and technical skills, required to engage in hot food culinary competition. Precision in the areas of knife skills, mise en place, recipe development, perfect execution of culinary technique, and exploration of in-depth organizational processes.

CUAR 271A Advanced Techniques of Culinary Competition - Hot Food (3)
Fundamental principles and technical skills required to engage in hot food culinary competition. Precision in knife skills, mise en place, recipe development, perfect execution of culinary technique, and exploration of in-depth organizational processes. Advanced technique of culinary competition designed for culinary teams advancing to the next level of competition. Prerequisite: CUAR 271.

CUAR 272 Techniques of Culinary Competition - Cold Food (3)
Fundamental principles and technical skills required to engage in cold food culinary competition. Expose students to theories and principles of cold food show platters, elementary glazing techniques, hot food shown cold and other cold food competition concepts.

CUAR 272A Advanced Techniques of Culinary Competition - Cold Food (3)
Fundamental principles and technical skills required to engage in cold food culinary competition. Precision in knife skills, mise en place, recipe development, perfect execution of culinary techniques, and exploration of in-depth organizational processes. Advanced techniques of culinary competition for culinary teams advancing to the next level of competition. Prerequisite: CUAR 272.

CUAR 281 Internship (1-6)
Places students in an actual work situation where they participate in the operation of a foodservice establishment.

CUAR 296 Topics: (1-5)

DANCE (DANC)

✓ **DANC 115 Dance Appreciation-GTAH1 (3)**
Exploration of the roots and trends of the art of dance from the primitive to the contemporary. Introduction of esthetic guidelines for looking at dance as it relates to America and the world.

DANC 154 Dance Team (1)
Participation on the Mavettes Dance Team at the freshman standing level. Audition or Consent of Instructor Required. Only one credit hour of DANC 154 counts as a KINA activity credit.

DANC 156 Dance Performance (1)
Student participation in the production of a dance supervised by faculty or guest artist. Students must audition. Corequisite: one technique class.

DANC 160 Beginning Ballet (1)
Includes alignment, balance, endurance, flexibility, and strength in elementary technical proficiency.

DANC 169 Beginning Modern Dance (1)
Includes alignment, balance, endurance, flexibility, and strength in elementary technical proficiency.

DANC 174 Beginning Jazz Dance (1)
Including terminology, theory, history & critical analysis of the Art Form.

DANC 177 Beginning Tap Dance (1)
Including terminology, theory, history & critical analysis of the Art Form.

DANC 180 Beginning Hip Hop Dance (1)
Fundamentals of Hip Hop, including alignment, balance, endurance, flexibility, and strength, in elementary technical proficiency.

DANC 181 Ballet I (2)
Beginning ballet technique for students intending to progress to an intermediate level.

DANC 182 Jazz I (2)
Beginning jazz technique for students intending to progress to an intermediate level.

DANC 183 Modern I (2)
Beginning modern technique for students intending to progress to an intermediate level.

DANC 184 Tap I (2)
Beginning tap technique for students intending to progress to an intermediate level.

DANC 196 Topics (1-3)

DANC 219 Ballroom Dance (2)

DANC 225 The Healthy Dancer (3)
Exploration into conditioning, nutrition, injury prevention, basic anatomy and

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motivational techniques unique to the dance student.

DANC 230 Modern IIA (2)
Intermediate modern dance technique. Prerequisite: DANC 169 and 169L, or consent of instructor.

DANC 231 Modern IIB (2)
Intermediate modern dance technique. Prerequisite: DANC 230 or consent of instructor.

DANC 232 Jazz IIA (2)
Intermediate jazz dance technique. Prerequisite: DANC 174, or consent of instructor.

DANC 233 Jazz IIB (2)
Intermediate jazz dance technique. Prerequisite: DANC 232 or consent of instructor.

DANC 234 Ballet IIA (2)
Intermediate ballet technique. Prerequisite: DANC 160, or consent of instructor.

DANC 235 Ballet IIB (2)
Intermediate ballet technique. Prerequisite: DANC 234 or consent of instructor.

DANC 236 Tap IIa (2)
Intermediate tap dance technique. Prerequisite: DANC 177, or consent of instructor.

DANC 237 Tap IIB (2)
Intermediate tap dance technique. Prerequisite: DANC 236 or consent of instructor.

DANC 250 Dance Improvisation (2)
Introduction to and application of basic theories of dance improvisation.

DANC 254 Dance Team (1)
Participation on the Mavettes Dance Team at the sophmore standing level.

DANC 255 Choreography (3)
Introduction to and application of basic theories of choreography, including principles of critical analysis. Prerequisite: DANC 250 or consent of instructor.

DANC 256 Dance Performance (1)
Student participation in the production of a dance supervised by faculty or guest artist. Students must audition. Corequisite: one technique class.

DANC 280 Hip Hop II (1)
Intermediate theory and practice of Hip Hop. Prerequisite: DANC 180 or consent of instructor.

DANC 290 Choreography Practicum I (1)
Student practice in choreography and producing an original dancework. May be repeated once for credit.

DANC 296 Topics (1-3)

DANC 310 Dance Pedagogy (3)
Theory and application of methods of teaching dance techniques. Prerequisite: 4 semester hours of dance technique (ballet, jazz, modern and/or tap).

DANC 315 History and Philosophy of Dance I (3)
Cultural and historical exploration of dance, from its primitive roots to the 20th Century. Prerequisite: ENGL 112.

DANC 316 History and Philosophy of Dance II (3)
Cultural, historic, and aesthetic exploration of dance in the 20th Century. Prerequisite: DANC 315.

DANC 328 Music Analysis for Dance (3)
Exploration of rhythmic structure inherent in dance, including music notation, rhythmic coordination as it relates to dance and musicality of the body. Prerequisite: consent of instructor.

DANC 330 Modern IIIA (2)
Intermediate to advanced modern dance technique. Prerequisite: Consent of instructor.

DANC 331 Modern IIIB (2)
Intermediate to advanced modern dance technique. Prerequisite: DANC 330 or consent of instructor.

DANC 332 Jazz IIIA (2)
Intermediate to advanced jazz dance technique. Prerequisite: consent of instructor.

DANC 333 Jazz IIIB (2)
Intermediate to advanced jazz dance technique. Prerequisite: consent of instructor.

DANC 334 Ballet IIIA (2)
Intermediate to advanced ballet technique. Prerequisite: consent of instructor.

DANC 335 Ballet IIIB (2)
Intermediate to advanced ballet technique. Prerequisite: consent of instructor.

DANC 336 Tap IIIA (2)
Intermediate to advanced tap dance technique. Prerequisite: consent of instructor.

DANC 337 Tap IIIB (2)
Intermediate to advanced tap dance technique. Prerequisite: consent of instructor.

DANC 354 Dance Team (1)
Participation on the Mavettes Dance Team at the junior standing level.

DANC 355 Advanced Choreography (3)
Advanced investigation and application of theories of choreography, including critical analysis of the art form. Prerequisite: DANC 255 or consent of instructor.

DANC 356 Dance Performance (1)
Student participation in the production of a dance work supervised by faculty or guest artist. Prerequisites: by audition, DANC 256, or consent of instructor. Corequisite: one technique class.

DANC 390 Choreography Practicum II (1)
Student practice in choreography and producing an original dance work. May be repeated once for credit. Prerequisite: DANC 290 or consent of instructor.

DANC 395 Independent Study (1-3)

DANC 396 Topics: (1-3)

DANC 430 Modern IVA (2)
Intermediate/advanced modern dance technique. Prerequisite: Consent of instructor.

DANC 431 Modern IVB (2)
Advanced modern dance technique. Prerequisite: consent of instructor.

DANC 432 Jazz IVA (2)
Advanced jazz dance technique. Prerequisite: instructor consent.

DANC 433 Jazz IVB (2)
Intermediate to advanced jazz dance technique. Prerequisite: Consent of instructor.

DANC 434 Ballet IVA (2)
Intermediate to advanced ballet technique. Prerequisite: Consent of instructor.

DANC 435 Ballet IVB (2)
Advanced ballet technique. Prerequisite: consent of instructor.

DANC 436 Tap IVA (2)
Intermediate to advanced tap dance technique. Prerequisite: Consent of instructor.

DANC 437 Tap IVB (2)
Advanced tap dance technique. Prerequisite: consent of instructor.

DANC 454 Dance Team (1)
Participation on the Mavettes Dance Team at the senior standing level.

DANC 456 Dance Performance (1)
Student participation in the production of a dance work supervised by faculty or guest artist. Prerequisite: by audition, DANC 356, or consent of instructor. Corequisite: one technique class.

DANC 490 Choreography Practicum III (1)
Student practice in choreography and producing an original dance work. May be repeated once for credit. Prerequisite: DANC 390 or consent of instructor.

DANC 494 Senior Dance Capstone (3)
Exploration of and preparation for dance professions/careers for upper division dance students.

DANC 495 Independent Study (1-3)

DANC 496 Topics (1-3)

ECONOMICS (ECON)

✓ **ECON 201 Principles of Macroeconomics-GTSS1 (3)**
Basic concepts of economics. Courses must be taken in sequence and are not open to freshmen.

✓ **ECON 202 Principles of Microeconomics-GTSS1 (3)**
Basic concepts of economics. Courses must be taken in sequence and are not open to freshmen.

ECON 301 Labor-Management Relations (3)
Organized labor movement, employer labor policies, collective bargaining, wages and wage regulation, social insurance, and public labor policy. Counts as management course for BBA candidates. Prerequisites: ECON 201, 202, or equivalent.

ECON 310 Money and Banking (3)
Monetary, credit, and banking systems in the United States. Counts as management course for BBA candidates. Prerequisites: ECON 201, 202, or equivalent.

ECON 312 Economic History of the United States (3)
Economic development of the United States and the nation's economic institutions from the colonial period to the present. Prerequisites: ECON 201, 202 or HIST 131, 132, or consent of instructor.

ECON 320 History of Economic Ideas (3)
Development of economic analysis, thought, theories, and doctrines from the ancient world to recent times. Prerequisites: ECON 201, 202, or equivalent.

ECON 342 Intermediate Macroeconomic Theory (3)
Factors determining the level and rate of growth of GDP, the inflation rate, and the employment rate. Policies that have been (or may be) used to influence these variables, and empirical evidences on the relationships among variables are also studied. Prerequisites: ECON 201, 202, or equivalent, or consent of instructor.

ECON 343 Intermediate Microeconomic Theory (3)
Problems of resource scarcity in a market economy. Emphasis is placed on an analysis of resource allocation under different forms of competition. Covers theory of the firm, theories of market structure, efficiency, equity, and the application of public policy. Prerequisites: ECON 201, 202, or equivalent, or consent of instructor.

ECON 395 Independent Study (1-3)

ECON 396 Topics (1-3)

ECON 401 Economic Organization and Public Policy (3)
Political economy of economic organization and public policy including analysis of the structure/conduct dimensions of industry and government institutions and their effects on resource allocation, income distribution, and economic performance. Antitrust, regulation, and other policies are treated concurrently. Counts as a management course for BBA candidates. Prerequisites: ECON 201, 202 or equivalent.

ECON 410 Public Sector Economics (3)
Political economy of government finance including analysis of the effects of government revenue and expenditure policies on resource allocation, income distribution, and economic performance. Counts as a management course for BBA candidates. Prerequisites: ECON 201, 202, or equivalent.

ECON 415 Econometrics (3)
Application of advanced statistical methods to economic and business problems. Includes multiple regression analysis. Sophisticated cross sectional models such as instrumental variable, probit, and tobit. Time series topics such as forecasting, autoregressive models, vector autoregressions, cointegration, and some panel methods. Prerequisites: CISB 341 or MANG 341, and ECON 201.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

ECON 420 International Economics (3)
International trade theory and policy such as balance of payments analysis, international investment flows, and the position of the dollar in foreign exchange transactions. Prerequisites: ECON 201, 202, or equivalent.

ECON 495 Independent Study (1-3)

ECON 496 Topics (1-3)

ECON 505 Advanced Econometrics (3)
Application of advanced statistical methods to economic and business problems. Includes multiple regression analysis. Sophisticated cross sectional models such as instrumental variable, probit, and tobit. Time series topics such as forecasting, autoregressive models, vector autoregressions, cointegration, and some panel methods. Demonstration of mastery of material through graduate level projects, writing, and presentations. Prerequisites: CISB 341 or MANG 341, and ECON 201.

ECON 530 Managerial Economics (3)
The focus of this course is the application of economic theory and its tools to everyday business activities. Topics to be covered include the analytical tools of economics, macro and micro economic theory, and factors that influence demand.

EDUCATION: CAREER/ TECHNICAL (EDUT)

EDUT 250 Career and Technical Education in Colorado (1)
Explores common elements of Career and Technical Education philosophy and current practices. It details the philosophy of Career and Technical Education (CTE), the federal Carl D. Perkins legislation and related guidelines for CTE, the Colorado Technical Act, national and state regulatory agencies, the CCCS program approval process, enrollment management and advising strategies, relevant local and national issues, and quality assurance principles.

EDUT 251 Secondary CTE Capstone (3)
This capstone course in the secondary CTE credentialing sequence offers an in-depth analysis of secondary career and technical student organizations and competitions, the Colorado Technical Act, working with exceptional students, creating and effectively deploying program advisory committees, and an overview of educational and political systems in Colorado. The final project is an analysis of the efficiency with which one's employing school district funds, operates and assesses CTE programs.

EDUT 260 Adult Learning and Teaching (3)
Examines the philosophy of community colleges and/or secondary schools and the roles and responsibilities of the faculty member within the college/school community. Introduces basic instructional theories and applications, with particular emphasis on adult learners. Includes syllabus development, learning goals and outcomes, and lesson plans. Emphasizes teaching to a diverse student body, classroom management, assessment and instructional technology.

EDUT 288 Practicum II (1)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the education facility and with the direct guidance of the instructor.

EDUT 289 Capstone (1)
Focuses on a demonstrated culmination of learning within a given program of study.

EDUCATION: EARLY CHILDHOOD EDUCATION (EDEC)

EDEC 101 Introduction to Early Childhood (3)
Includes the eight key areas of professional knowledge: Child Growth and Development; Health, Nutrition, and Safety; Developmentally Appropriate Practices; Guidance; Family and Community Relationships; Diversity; Professionalism; Administration and Supervision. Overview of history and philosophy. Focuses on ages birth through age 8. Assignments require 3 hours of field experience and may include observation/participation in an early childhood setting.

EDEC 102 Introduction to Early Childhood Professions Lab Experiences (3)
Field experience. Demonstrate knowledge of child growth and development, guidance techniques, planning and implementation of curriculum, assessment techniques and application of laws and standards. Supervised placement provides opportunity to observe, to practice appropriate interactions and to develop effective guidance and nurturing techniques. Addresses ages birth through 8. Assignments include a required field experience of 60 hours. Prerequisite: EDEC 101.

EDEC 103 Guidance Strategies (3)
Explores guidance theories and techniques, real world applications, goals, and factors influencing expectations, classroom management issues. Techniques for prosocial skills, violence prevention, anger management and providing familites with community resources discussed. Focus on birth through age 8. Assignments require 3 hours of field experience and may include observation/participation in an early childhood setting.

EDEC 113 Infant and Toddler Theory and Practice (3)
Introduction to children from birth through age 3. Includes the eight key areas of professional knowledge: Child Growth and Development; Health, Nutrition and Safety; Developmentally Appropriate Practices; Guidance; Family and Community Relationships; Diversity; Professionalism; Administration and Supervision. Overview of history and philosophy of early childhood education. Assignments require 3 hours of field experience and may include

observation/participation in an early childhood setting.

EDEC 114 Introduction to Infant/ Toddler Lab Techniques (3)
Field experience. Demonstrate knowledge of child growth and development, guidance techniques, planning and implementation of curriculum, assessment techniques, and application of laws and standards. Supervised placement provides opportunity to observe, to practice appropriate interactions and to develop effective guidance and nurturing techniques. Addresses ages birth through age 3 years. Assignments include a required field experience of 60 hours. Prerequisites: EDEC 101 or EDEC 113.

EDEC 122 Ethics in Early Childhood Education (1)
Practical approach to recognizing, understanding, and resolving issues confronting professionals in education and business. Emphasizes historical development of ethics. Application of critical thinking and decision-making skills to ethical dilemmas in classroom, business, community and governmental settings. Exploration of methods of resolution through ethical reasoning and the National Association for the Education of Young Children (NAEYC) professional codes. Emphasizes logical analysis, critical thinking, and responsible ethical decision making.

EDEC 195 Independent Study (1-3)

EDEC 196 Topics (1-3)

EDEC 205 Nutrition, Health, Safety (3)
Focus on nutrition, health, and safety as key factors for optimal growth and development of young children. Includes nutrient knowledge, menu planning, food program participation, health practices, management and safety, appropriate activities, and communication with families. Addresses birth through age 8. Assignments require 3 hours of field experience and may include observation/participation in an early childhood setting.

EDEC 230 Curriculum and Development: Infant/ Toddler (3)
Curriculum for the age group birth to 3 years. Emphasis on maintaining healthy, safe environmental activities developmentally appropriate to stimulate language, social emotional, cognitive, and physical development. Assignments require 3 hours of field experience and may include observation/participation in an early childhood setting.

EDEC 237 Theories and Techniques of Social and Emotional Growth (3)
Incorporates student specific techniques and strategies for guiding and enhancing social and emotional growth in children 0-8 years. Introduces and compares the theories underlying quality interactions and patterns of social and emotional progression.

EDEC 238 Early Childhood Development 0-8 Years (3)
Theories, current research and developmental ages and stages of children, conception to 8 years. Emphasizes physical, cognitive, language, social and emotional domains, concept of the whole child and how adults can provide a supportive environment. Assignments require 3 hours of field experience and may include observation/ participation in an early childhood setting.

EDEC 240 Curriculum and Development: Early Childhood (3)
Methods of creating and implementing curriculum based on understanding of developmentally appropriate practice for children, birth to age 8. Application of the teaching/learning process, and of managing the learning environment, will draw from research and practical application. Assignments require 3 hours of field experience and may include observation/participation in an early childhood setting.Prerequisites: EDEC 101 or permission of instructor.

EDEC 241 Early Childhood Administration: Human Relations (3)
Roles and relationships among children, families, early childhood professionals, and community resources. Exploration of family structures, communication skills, roles of support organizations, team building, evaluation tools, self-reflection, and advocacy. Assignments require 3 hours field experience and may include observation/participation in an early childhood setting.

EDEC 250 Exceptionalities in Early Education (3)
Presents an overview of critical elements related to educating young children who may have learning challenges and/ or be advanced in the early childhood setting. Topics include the following: typical and atypical development, legal requirements, research based practices related to inclusion, teaming and collaboration, and accommodations and adaptations. Student will learn how different cognitive/social/physical abilities impact a young child's learning process. Includes conception to age 8. Assignments require 3 hours of field experience and may include observation/participation in an early childhood setting. Prerequisite: EDEC 101 or permission of instructor.

EDEC 264 Administration in Early Education (3)
Overview of management concepts applicable in a variety of early education settings. Focuses on management of programs and personnel, program and staff development, fiscal administration, and evaluation. Assignments require 3 hours field experience and may include observation/participation in an early childhood setting.

EDEC 290 Early Literacy for the Young Child (2)
In-depth view of early literacy development in a changing, diverse society. Intended for the prospective early childhood teacher. Includes research about the language and literacy of young children. Explores how learners develop the ability to communicate and interact from birth to age 8. Assignments require 3 hours field experience and may include observation/participation in an early childhood setting.

EDEC 296 Topics (1-3)

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

EDEC 297 Practicum (1-2)
Supervised experience working with children and families in early care and education settings. Accepted by the State Department of Child Care Services for licensing purposes. Scheduling is flexible. Prerequisite: consent of instructor.

EDEC 299 Student Teaching in Early Education (3)
Supervised teaching experience. Allows the student teacher the opportunity to apply developmentally appropriate, standards-based practices, theories and philosophies acquired in prior coursework. Provides incremental responsibility for teaching, supervision, and guidance of young children birth to 8 years. 300 field experience hours in an approved child care facility or school. Prerequisites: EDEC 101, EDEC 122, EDEC 240, EDEC 250, and permission of instructor.

EDUCATION: EARLY CHILDHOOD TEACHING – SPECIAL EDUCATION (ECSE)

ECSE 320 Learner Development and Individual Differences (3)
Exploration of child development and individual differences to respond to the unique and individualized needs of young children with exceptionalities. Field experience required. Prerequisite: Admission to the Teacher Education Program

ECSE 410 Building Family and Community Partnerships (1)
Introduction to the concept of family systems, the impact of children with diverse needs upon the family system, and the role of the educator in partnering with families and the community. Prerequisite: Admission into the Teacher Education program.

ECSE 430 Instructional Strategies for Inclusion and Intervention, Birth-8 Years (3)
Exploration of evidence-based instructional strategies, focused on communication and sensory processing, to advance learning of young children with exceptionalities. Prerequisites: EDUC 340, EDUC 374, and ECSE 320.

ECSE 435 Assessment and Evaluation of the Young Child, Birth-8 Years (3)
Exploration and application of technically sound formal and informal assessments that minimize bias, and measurement principles and practices to evaluate and guide educational decisions through collaboration with colleagues and families. Prerequisites: EDUC 340 and ECSE 320.

ECSE 450 Individual Behavior Support and Guidance with Young Learners (3)
Exploration of behavioral theories and their application to individual and classroom management of young learners with an emphasis on the principles of applied behavior analysis. Prerequisites: EDUC 340, EDUC 374, and ECSE 320

ECSE 499 Teaching Internship and Colloquia: Early Childhood Ages 3 - 5/ Pre-K (6)
Participation in full-time supervised teaching experience for eight weeks in an inclusive classroom designed to allow the intern the opportunity to apply standards-based education, theories, and philosophies acquired in professional education coursework. Provides support in teaching and learning of Pre-K students, ages 3 - 5. Prerequisites: All program and degree requirements and courses must be successfully completed.

EDUCATION: TEACHER LICENSURE (EDUC)

EDUC 100 Introduction to Libraries (3)
Provides a general overview of libraries and their roles in schools and the community. The evolving role of libraries will be explored in the context of professional/school settings, different types of libraries, and the evolution of information, access, and distribution in a digital age.

EDUC 101 Information Literacy (3)
A theoretical approach to the flow of information and a practical introduction to the skills necessary to navigate information systems. Print and electronic resources; legal, economic, social and public aspects of information resources; strategies for critical evaluation of information resources; library services and resources.

EDUC 115 What It Means To Be An Educator (1)
Overview of the teacher education program, profession and what it means to be an educator. Introduction to social, legal, historical, political, theoretical, and philosophical foundations of education. Course time will include school and educational services visitations. Please note: Students must earn a grade of A or B in this class if they desire to be admitted to the Teacher Education program. Prerequisite: ENGL 111.

EDUC 150 American Education: Past, Present, and Future (3)
An honors course that includes an historical view of public and private education; current challenges; demographic, sociological, technological, and economic trends and their effects on education; educational reform; comparative education systems; and future directions for public and private schooling in America.

EDUC 196 Topics (1-3)

EDUC 215 Teaching as a Profession (1)
Overview of the teacher education program and profession. Introduction to schools, curriculum and instruction, accountability, learning environments, developing professionalism, and theoretical and philosophical foundations of education. Course time will include school and educational services visitations. This is an on-campus course that is web-enhanced, meaning we meet face-to-face each week AND we have a web-based course site (D2L) to support the classroom environment. Please note: Students must earn a grade of A or B in this class if they desire to be admitted to the Teacher

Education program. Prerequisite: EDUC 115.

EDUC 301 Emergent Literacy for Early Childhood (3)
Exploration of principles, methods, and materials for teaching young children language and literacy through a play-based integrated curriculum from birth to kindergarten. Survey of current research in emergent language and literacy including language development and acquisition, family and community roles, teaching and learning strategies, literature in the curriculum and ongoing assessment. Includes a minimum of 20 hours of field experience. Prerequisites: Admission to Teacher Education Program and EDUC 340.

EDUC 311 Creative and Physical Expressions for Children (3)
Facilitation of children's creative and physical expression and problem solving in music, art, drama, games, movement, and dance. Prerequisite: Admission to the Teacher Education Program.

EDUC 340 Pedagogical and Assessment Knowledge for Teachers: Early Childhood, Birth - 8 years (3)
Exploration of age/grade level teaching strategies, motivation principles, informal and formal assessments, planning strategies, and classroom management techniques. Includes a minimum of 20 hours of field experience. Prerequisites: Admission to the Teacher Education Program or permission of the instructor.

EDUC 341 Pedagogy and Assessment: K-6/ Elementary (3)
Exploration of age/grade level teaching strategies, motivation principles, informal and formal assessments, planning strategies, and classroom management techniques. Includes a minimum of 20 hours of field experience. Prerequisite: Admission to the Teacher Education Program. Corequisite: EDUC 343.

EDUC 342 Pedagogy and Assessment: Secondary and K-12 (3)
Exploration of age/grade level teaching strategies, motivation principles, informal and formal assessments, planning strategies, and classroom management techniques. Includes a minimum of 20 hours of field experience. Prerequisites: Admission to the Teacher Education Program. Corequisite: EDUC 343.

EDUC 343 Teaching to Diversity (3)
Study of differences in student development and approaches to learning. Addresses ethnic, linguistic, gender, sexuality, socioeconomic, ability/disability, and community diversity. Includes a minimum of 20 hours of field experience. Prerequisites: Admission to the Teacher Education Program. Corequisites: EDUC 340 or EDUC 341 or EDUC 342.

EDUC 374 Exceptional and English Language Learners in the Inclusive Classroom (3)
Study of exceptionalities and English Language Learner (ELL) characteristics. The use of strategies for identifying, adapting, accommodating, and/or modifying the learning environment to meet the various needs. Includes intellectually challenged, learning disabled, social/emotional disorders, physically disabled, gifted, and English language learners. Prerequisites: EDUC 341 or EDUC 342, and EDUC 343. May be taken concurrently with EDUC 340.

EDUC 378 Technology for K-12 Educators (1)
Digital technology's role in the teaching/learning process. Engaging technology in the classroom. Topics include New Literacies, Web 2.0 tools, e-books, interactive presentation tools, et al. Prerequisites: Admission to Teacher Education Program.

EDUC 395 Independent Study (1-3)

EDUC 396 Topics (1-3)

EDUC 440 Methods of Teaching Language and Literacy: EC (3)
Survey of current research in early/ emergent language and literacy, including language development and acquisition, family and community roles, teaching and learning strategies, literature in the curriculum, and ongoing assessment in instruction. Includes a minimum of 50 hours of field experience. Prerequisites: Admission to the Teacher Education Program and EDUC 340; may be taken concurrently with EDUC 451.

EDUC 441 Methods of Teaching Language and Literacy: Elementary (3)
Exploration of student literacy development in multiple literacies, with a focus in fluency and comprehension. Study and application of instructional strategies for the reading/writing processes, vocabulary development, spelling development, comprehension strategies, reading and writing workshops, literacy assessment, and integration across the content areas. Field placements will be in a lab school environment for two mornings of school per week. Includes a minimum of 80 hours field experience. Prerequisites: Admission to the Teacher Education Program, EDUC 340 and/or 341 and 343.

EDUC 442 Integrating Literacy Across the Curriculum: Secondary and K-12 Art (3)
Exploration of multiple forms of student literacies. Study and application of instructional strategies for various literary genres across the middle school and high school curriculum with a focus in philosophical and theoretical perspectives from multicultural texts. Candidates develop a fully integrated unit to implement in field study. Includes a minimum of 60 hours of field experience. Prerequisites: Admission to the Teacher Education Program, EDUC 342, and EDUC 343. Corequisite: EDUC 497.

EDUC 451 Methods of Teaching Mathematics: Early Childhood/Elementary (3)
Prepares students to teach mathematics to elementary age students. Focus on major concepts, procedures, and

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reasoning processes that define number systems and number sense, geometry, measurement, statistics and probability, and algebra. Theoretical and practical approaches support learning about standards, content, delivery, and assessment. Field placements will be in a lab school environment for three afternoons of school per week. Includes a minimum of 60 hours of field experience. Prerequisites: Admission to the Teacher Education Program, EDUC 340 and/or EDUC 341, EDUC 343, MATH 105, MATH 205, and MATH 301. Corequisite: EDUC 471.

EDUC 461 Methods of Teaching Science and Social Studies: Early Childhood/ Elementary (3)
Study and application of content standards in science, health, civics, geography, history, and economics for elementary age students Develops teaching proficiency and an understanding of integration of these subjects across the content areas. Field experiences are incorporated into the math/literacy block during three school days per week. Prerequisites: Admission to the Teacher Education Program, EDUC 340 and/or EDUC 341, EDUC 343. Corequisite: EDUC 471.

EDUC 471 Educational Assessment for the K-12 Educator (1)
Current principles of assessment in the K-12 classroom. Includes selecting, developing, and evaluating a variety of assessment methods/types in the various content areas. Discuss how to analyze, interpret, and communicate assessment results with administrators, families, and students for the purposes of making instruction/curricular decisions. Prerequisites: EDUC 341 or EDUC 342, and EDUC 343. Corequisites: EDUC 441, EDUC 451, EDUC 461, or consent of instructor.

EDUC 475 Classroom Management for K-12 Educators (1)
Effective classroom management. Establish productive classroom climate. Applications of management techniques to help students become responsible for their behaviors and choices. Student motivation, positive student-teacher relationships, effective partnerships between parents and school. Includes strategies to minimize and prevent classroom and behavior management problems as well as time management techniques. Prerequisites: EDUC 341 or 342, EDUC 343, EDUC 441, EDUC 451, and EDUC 461, or consent of instructor.

EDUC 495 Independent Study (1-3)

EDUC 496 Topics (1-3)

EDUC 497 Content Methodology Practicum (3)
Theory and practice of differentiated instruction, lesson study design and implementation, and basic concepts of Understanding by Design. Introduction to comprehensive school reform and curriculum design, as well as a focus on the improvement of teaching methodology across the curriculum. Includes a minimum of 80 hours of field experience. Prerequisites: Admission to the Teacher Education Program, EDUC 342 and 343, and completion of all content area courses. Corequisites: EDUC 442 and EDUC 497A, B, C, D, or E as required by degree.

EDUC 497A Methods of Teaching Secondary English (2)
Theory and practice of teaching English language arts in middle and high schools. Current strategies, programs, materials, and media for the development of curriculum in reading comprehension, language, linguistics, comprehension, and rhetoric. Lesson preparation and presentation required. Prerequisites: Admission to Teacher Education Program. Corequisites: EDUC 442 and EDUC 497, or EDUC 342 and EDUC 343. Note: This course is only offered in the fall semester.

EDUC 497B Methods of Teaching Secondary Social Sciences (2)
Theory and practice of teaching history and the social sciences in middle and high schools. Current strategies, programs, materials, and media for the development of curriculum in United States history, world history, government, civics, political science, geography, economics, and behavioral science. Lesson preparation and presentation required. Prerequisites: Admission to Teacher Education Program. Corequisites: EDUC 442 and EDUC 497, or EDUC 342 and EDUC 343. Note: This course is only offered in the fall semester.

EDUC 497C Methods of Teaching Secondary Mathematics (2)
Theory and practice of teaching mathematics in middle and high schools. Current strategies, programs, materials, and media for the development of curriculum in arithmetic, basic algebra, functions, graphing, probability, statistics, and integrated math. Lesson preparation and presentation required. Prerequisites: Admission to the Teacher Education Program. Corequisites: EDUC 442 and EDUC 497, or EDUC 342 and EDUC 343. Note: This course is only offered in the fall semester.

EDUC 497D Methods of Teaching Secondary Science (2)
Theory and practice of teaching science in middle and high schools. Current strategies, programs, materials, and media for the development of curriculum in: scientific methodology, techniques, and history; physical, life, and earth sciences; and science and technology. Lesson preparation and presentation required. Prerequisites: Admission to Teacher Education Program. Corequisites: EDUC 442 and EDUC 497, or EDUC 342 and EDUC 343. Note: This course is only offered in the fall semester.

EDUC 497E Methods of Teaching Secondary Spanish (2)
Theory and practice of teaching Spanish in middle and high schools. Current strategies, programs, materials, and media for the development of curriculum in: interpretive listening, structure of the language and grammatical accuracy, interpretive reading, and cultural perspectives. Lesson preparation and presentation required. Prerequisites: Admission to Teacher Education Program. Corequisites: EDUC 442 and EDUC 497, or EDUC 342 and EDUC 343. Note: This course is only offered in the fall semester.

EDUC 499A Teaching Internship and Colloquia: K-2 (6)
Full-time supervised teaching experience for eight weeks in an inclusive classroom designed to allow the intern the opportunity to apply standards-based education and theories and philsophies aquired in professional education coursework. Provides support in teaching and learning of K-2 students. Prerequisites: All program and degree requirements must be successfully completed.

EDUC 499B Teaching Internship and Colloquia: 3-6 (6)
Available for students who are pursuing ECE/ELED licensure and standards-based education: an eight-week experience. Colloquiums are included and required. Prerequisites: Formal admission to the Teacher Education Program; EDUC 340 and/or 341, 343, 440 and/or 441, 451, 452, 453; all other course work for bachelor's degree completed; 2.75 cumulative GPA as well as 2.75 GPA in major and 2.75 GPA in EDUC classes.

EDUC 499C Teaching Internship and Colloquia: Elementary (12)
Full-time (40 hrs min/week) supervised teaching experience designed to allow the intern the opportunity to apply standards-based education and theories and philosophies acquired in professional education coursework. Three required colloquia on Thursday evenings are included during this 15-week experience. Students must begin internship a minimum of one week prior to the beginning of the district school semester, regardless of the Colorado Mesa University start date. Prerequisites: Formal admission to the Teacher Education Program; EDUC 341, 343, 441, 451, 461 and all other course work for bachelor's degree completed; as well as 2.8 GPA in major and 2.8 GPA in EDUC classes.

EDUC 499D Teaching Internship and Colloquia: Elementary for K-12 (6)
Full-time (40 hrs min/week) supervised teaching experience designed to allow the intern the opportunity to apply standards-based education and theories and philosophies acquired in professional education coursework. Required colloquia on Thursday evenings are included during this eight-week experience. Prerequisites: Formal admission to the Teacher Education Program; EDUC 342, 343, 441 (except Music and Kinesiology majors); appropriate content area methods course/s; all other coursework for bachelor's degree completed; 2.8 cumulative GPA as well as 2.8 GPA in major and 2.8 GPA in EDUC classes. Corequisite: EDUC 499H.

EDUC 499G Teaching Internship and Colloquia: Secondary (12)
Full-time (40 hours min/week) supervised teaching experience designed to allow the intern the opportunity to apply standards-based education and theories and philosophies acquired in professional education coursework. Three required colloquia on Thursday evenings are included during this 15-week experience. Students must begin internship a minimum of one week prior to the beginning of the district school semester, regardless of the Colorado Mesa University start date. Prerequisites: Formal admission to the Teacher Education Program; EDUC 342, 343, 442, 497, and 497A, B, C, D, or E as appropriate for content area major; all other course work for bachelor's degree completed; 2.8 cumulative GPA, as well as 2.8 GPA in major and in 2.8 GPA in EDUC classes.

EDUC 499H Teaching Internship and Colloquia: Secondary for K-12 (6)
Supervised teaching experience at the secondary level for students who are pursuing K-12 licensure and standards-based education. Several colloquia are included in the eight-week experience. Prerequisites: Formal admission to the Teacher Education Program; EDUC 342, 343, 442 (except Music and Kinesiology majors); appropriate content area methods course/s; all other course work for bachelor's degree completed; 2.75 cumulative GPA as well as 2.75 GPA in major and 2.75 GPA in EDUC classes.

EDUC 500 Culture and Pedagogy (3)
This course centers on Pedagogy that explores the relationships between culture and learning as well as teacher ideology and belief systems. Examines critical pedagogy, pedagogies of resistance, and teaching for social justice. Prerequisites: Current teaching certificate, acceptance into M.A. program, GRE.

EDUC 501 Educational Technology (2)
Historical and conceptual analyses of ways to design, organize, and integrate curricula across subject areas. Review of various instructional design models and fundamental design principles that guide the development of instructional materials. Students will create multimedia materials for incorporation into a final product. Critique of curriculum discourse, process, and product. Teachers' roles in site-based curriculum and staff development.

EDUC 502 Theory, Design & Assessment of Curriculum (3)
Introduction to instructional design; production and evaluation of computer-based instructional materials and software; selection, evaluation, and use of instructional media.

EDUC 503 Introduction to Educational Research and Design (3)
An analysis of differing orientations to evaluation and research. Emphasis on assumptions, attitudes, and expectation of what constitutes scientific knowledge and explanation; relationship of research orientation, methods of inquiry theory, and practice in both qualitative and quantitative research strategies. Prerequisites: Current teaching certificate, acceptance into M.A. program, GRE.

EDUC 570 Classroom Management (1)
Advanced classroom management. Establish productive classroom climate. Applications of management techniques to help students become responsible for their behaviors and choices. Student motivation, positive student-teacher relationships, effective partnerships between parents and school. Includes strategies to minimize and prevent classroom and behavior management problems as well as time

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management techniques. Prerequisites: EDUC 591 and EDUC 586B.

EDUC 580 Secondary Instructional Methods Across the Curriculum (3)
Advanced theory and practice of differentiated instruction, lesson study design and implementation. Advanced curriculum design, teaching methodology across the curriculum. Prerequisites: EDUC 591 and EDUC 586B.

EDUC 580A Secondary Instructional Methods for English Language Arts (2)
Advanced theory and practice of teaching English language arts in middle and high schools. Current strategies programs, materials, and media for the development of curriculum in reading comprehension, language, linguistics, and rhetoric. Lesson preparation and presentation required. Prerequisites: EDUC 591 and EDUC 586B.

EDUC 580B Secondary Instructional Methods for Social Studies (2)
Advance theory and practice of teaching history and the social sciences in middle and high schools. Current strategies, programs, materials, and media for the development of curriculum in United States history, world history, government, civics, political science, geography, economics, and behavioral science. Lesson preparation and presentation required. Prerequisites: EDUC 591 and EDUC 586B.

EDUC 580C Secondary Instructional Methods for Mathematics (2)
Advance theory and practice of teaching mathematics in middle and high schools. Current strategies, programs, materials, and media for the development of curriculum in arithmetic, basic algebra, functions, graphing, probability, statistics, and integrated math. Lesson preparation and presentation required. Prerequisites: EDUC 591 and EDUC 586B.

EDUC 580D Secondary Instructional Methods for Science (2)
Advance theory and practice of teaching science in middle and high schools. Current strategies, programs, materials, and media for the development of curriculum in: scientific methodology, techniques, and history; physical, life, and earth sciences; and science and technology. Lesson preparation and presentation required. Prerequisites: EDUC 591 and EDUC 586B.

EDUC 580E Secondary Instructional Methods for Spanish (2)
Advance theory and practice of teaching Spanish in middle and high schools. Current strategies, programs, materials, and media for the development of curriculum in: interpretive listening, structure of the language and grammatical accuracy, interpretive reading, and cultural perspectives. Lesson preparation and presentation required. Prerequisites: EDUC 591 and EDUC 586B.

EDUC 584 Secondary Literacy Methods Across the Curriculum (3)
Advanced exploration of multiple forms of student literacies. Study and application of reading and comprehension strategies for literacy instruction in middle school and high school content areas. Candidates develope a fully integrated unit to implement in field study. Prerequisites: EDUC 586B and EDUC 591.

EDUC 585 Elementary Integrated Science, Social Studies, and Art Theory and Methodology K-6 (3)
Thematic approach, practical understanding of an integrated curricular approach by infusing inquiry-based science theory and methods, social studies theory and method, and art. Designing standards-based instruction as guided and exploratory interdisciplinary compulsories across the curricula. Field based with online and classrom components. Prerequisites: EDUC 591 and EDUC 586A.

EDUC 586A Accommodating Diverse and Exceptional Needs K-6 (3)
Designing, developing, implementing and assessing the effectiveness of instruction differentiated for relevant student diversity and exceptionalities; teaming with specialists; current state and federal guidelines and mandates. This course involves a minimum of twelve hours preparation/online interaction per week. Prerequisite: Admission to ITL program. Corequisite: EDUC 591.

EDUC 586B Accommodating Diverse and Exceptional Needs 6-12 (3)
Designing, developing, implementing and assessing the effectiveness of instruction differentiated for relevant student diversity and exceptionalities; teaming with specialists; current state and federal guidelines. This course involves a minimum of twelve hours preparation/online interaction per week. Prerequisite: Admission to ITL Program. Corequisite: EDUC 591.

EDUC 587 Elementary Reading and Language Arts Theory and Methodology K-6 (3)
Designing, developing, implementing and assessing well-aligned, well-differentiated, discipline specific curricula, instruction, assessments and accommodations related to developmental, gender, bilingual, special education unique to K-6 Literacy Education. Field based with online and classroom components. Prerequisites: EDUC 591 and EDUC 586A.

EDUC 588 Elementary Mathematics Theory and Methodology K-6 (3)
Designing, developing, implementing, and assessing well-aligned, well-differentiated, discipline-specific curriculum, instruction, assessments and accommodations unique to K-6 Math Education. Field based with online and classroom components. Prerequisites: EDUC 591 and EDUC 586A.

EDUC 591 ITL 1:Foundations of Curriculum, Instruction, and Assessment (9)
Designing cycles of instruction that are well-aligned (with standards and assessments); well-differentiated (for content, the learner and the situation): and support the development of self-directed learning. Course has online and classroom components. This May/June/July course involves a minimum of six hours of preparation/online interaction per day and participation

in twelve ten-hour classroom seminars. Prerequisite: Admission to the ITL program. Corequisite: EDUC 586A or EDUC 586B.

EDUC 592A ITL Elementary Pre-Internship (4)
Mentored pre-internship August-December placement to develop accuracy, fluency and complexity in the design, implementation and assessment of instruction through observing, assisting, teaming (90%) and lead teaching (10%). Prerequisites: EDUC 591 and EDUC 586A.

EDUC 592B ITL Secondary Pre-Internship (4)
Mentored pre-internship August-December placement to develop accuracy, fluency and complexity in the design, implementation and assessment of instruction through observing, assisting, teaming (90%) and lead teaching (10%). Prerequisites: EDUC 591 and EDUC 586B.

EDUC 595 Topics in Teaching (.5-3)

EDUC 596 Topics in the Content Areas (.5-4)

EDUC 599A ITL 3: Directed Teaching: Elementary Education (12)
Continued full-time mentored January-May placement to develop independent professional competence in instructional design, implementation and assessment, and document having had a positive effect on student learning, across fifteen weeks of full-time independent teaching. Two colloquia are an integral part of the experience requirement. Prerequisites: EDUC 485, EDUC 487, EDUC 488, EDUC 492A, EDUC 586A, and EDUC 591.

EDUC 599B ITL 3: Directed Teaching: Secondary Education (12)
Continued full-time mentored January-May placement to develop independent professional competence in instructional design, implementation and assessment, and document having had a positive effect on student learning, across fifteen weeks of full-time independent teaching. Two colloquia are an integral part of the experience requirement. Prerequisites: EDUC 441, EDUC 492B, EDUC 497, EDUC 497 A, B, C, or D, EDUC 586B, and EDUC 591.

EDUCATION: EDUCATIONAL LEADERSHIP COGNATE (EDLD)

EDLD 504 Best Practices in Curriculum, Assessment, Instruction (3)
This class will focus on the best practices effective schools use in the areas of curriculum, assessment, and instruction. The alignment of these three areas is critical to the development and sustainability of an effective standards-based educational system that is equitable for all learners. Major topics include curriculum mapping, assessment for and of learning, quality assessment techniques, instructional strategies aligned to curriculum taught and monitored, and effective interventions and differentiated instructional practices. Prerequisites: Current teaching certificate, acceptance into EDLD program.

EDLD 505 Reform and Organizational Change in Education (2)
Social and political assumptions underlying current efforts towards curriculum and instructional reform in elementary and secondary schools. Study of planning and evaluation in schools and school districts including strategic planning, effectiveness and curriculum audits, facility planning, and program planning and evaluation. Prerequisites: Current teaching certificate, acceptance into EDLD program.

EDLD 515 Dynamic School Leadership in a Democratic Society: Introduction to School Administration (2)
Study of the nature of educational leadership, administration, and management with reference to current practice at the school building level. Attention will be given to administrative theory and practice, philosophy, and organizational development. Through the examination of leadership, organizational and change models, students will learn how to analyze their school or district using political, structural, human resources and cultural frames. Prerequisites: Current teaching certificate, acceptance into EDLD program.

EDLD 520A Principalship I (2)
This introductory course will engage students in developing a comprehensive understanding of the role of the principal as instructional leader and change agent in today's PK-12 schools. Students will be introduced to the skill set needed to be an effective instructional leader and the knowledge base outlined in the Colorado Standards for the licensure of school principals. The historical role of the school principal will be compared and contrasted with the current demands of the modern school principal. Prerequisites: Current teaching certificate, acceptance into EDLD program.

EDLD 520B Principalship II (2)
This introductory course will engage students in developing a comprehensive understanding of the role of the principal as instructional leader and change agent in today's PK-12 schools. Students will be introduced to the skill set need to be an effective instructional leader and the knowledge base outlined in the Colorado Standards for the licensure of school principals. The historical role of the school principal will be compared and contrasted with the current demands of the modern school principal. Prerequisites: Current teaching certificate, acceptance into EDLD program, EDLD 520A.

EDLD 530 Legal Aspects of School Administration: Educational Policy and the Law (2)
Study of the relationship between politics, policy and governance of schools, including political systems, inter-governmental relations, power and conflict, and policy development regarding equity, quality and efficiency. While statutory and case law serve as the reference points for study and discussion, the primary objective is to gain an understanding of the relationship between the legal issues

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of education and the implications for administrative leadership. Prerequisites: Current teaching certificate, acceptance into EDLD program.

EDLD 531 School Finance and Budgeting (1)
This course focuses on the role of leaders as orchestrators of business operations of the school and the guardian of business decisions that maximize instructional effectiveness and achievement of organizational goals. Advanced study of the financial structure of public schools, including equity issues, taxation, revenue generation (grants) and budget development. Prerequisites: Current teaching certificate, acceptance into EDLD program.

EDLD 535 Internship in Educational Leadership I (1)
Gain knowledge and experience in varied aspects of school administration. Engagement in activities designed to develop and demonstrate leadership competencies essential for solving school problems, improving curriculum and instructional practices, and increasing student achievement. Leadership competencies align to state and national standards. Prerequisites: EDLD 520A, current teaching certificate, and acceptance into graduate program.

EDLD 540 School Improvement and Accountability (2)
Construction, administration and interpretation of educational assessments for the systematic analysis of student learning and teaching practice. Emphasis on the use and understanding of data analysis to improve teaching and learning in the classroom. Statistical analysis relating to education leadership decision-making applications. Prerequisites: Current teaching certificate, acceptance into the EDLD program.

EDLD 542 Instructional Supervision and Management/HR (3)
Study of effective human resources management, including recruitment, selection, induction, staff development, employee assistance, evaluation, contract negotiation and personnel management. The skills of conflict resolution and collaboration will be explored as well as ways to assess the learning organization needs. Prerequisites: Current teaching certificate, acceptance into M.A. program, GRE.

EDLD 544 Strategies in School Improvement (2)
This course focuses on strategies that lead to school improvement, and ultimately continuous student success. High Performing Schools use strategies that are intentional and well designed. They operate in a learning culture that is dedicated to learning for all. This course will enable the student to analyze the culture of high performing schools and engage in problem solving protocols related to improvement in their own settings. Prerequisites: Current teaching certificate, acceptance into EDLD program.

EDLD 545 Internship in Educational Leadership II (1)
Gain knowledge and experience in varied aspects of school administration. Engagement in activities designed to develop and demonstrate leadership competencies essential for solving school problems, improving curriculum and instructional practices, and increasing student achievement. Leadership competencies align to state and national standards. Prerequisites: EDLD 520A, current teaching certificate, and acceptance into graduate program.

EDLD 595 Independent Study (1-3)

EDUCATION: ENGLISH FOR SPEAKERS OF OTHER LANGUAGES COGNATE (EDUC)

EDUC 504 Methods of Teaching English as a Second Language (3)
Theory and practice of teaching English as a second language; techniques for teaching pronunciation, reading and writing in the context of communicative competence; analysis of resources available for ESL.

EDUC 510 ESL Strategies/Content Areas (3)
Strategies for assessing and teaching linguistically-diverse students in the content areas. Topics include role-playing, language dynamics, measurement, relevant research, and classroom practice.

EDUC 535 Internship in ESOL: K-6 (3)
This practicum applies theory and research to the analysis and synthesis of field experiences in ESOL. The practicum will be integrated into a concluding research project that structures students' reflections about their growth and vision as a leader. Through exploration of research and practicum methodology students will frame their capstone project proposals leading to final analysis and presentation following. Prerequisites: Current teaching certificate, acceptance into M.A. program, GRE.

EDUC 541 Exceptional Learners (3)
Study of exceptionality and special education, legislation, individualized education programs (IEP), planning and delivering services, multicultural and bilingual aspects of special education, classifications (impairments), exceptionality and the family. 20-hour field experience required.

EDUC 543 Inclusion Methods/ Strategies (3)
Collaboration, community and families, legal aspects of placement, classroom management, and methods and strategies used in inclusive classrooms. Each student is required to complete a minimum of 20 field experience hours.

EDUC 545 Internship in ESOL: 7-12 (3)
This practicum applies theory and research to the analysis and synthesis of field experiences in ESOL. The practicum will be integrated into a concluding research project that structures students' reflections about their growth and vision as a leader. Through exploration of research and practicum methodology students will frame their capstone project proposals leading to final analysis and presentation following. Prerequisites: Current teaching certificate, acceptance into M.A. program, GRE.

EDUC 554 Theories of Second Language Acquisition (3)
Research on second language acquisition, differences between first and second language acquisition, application of theories to classroom practice.

EDUC 555 Multicultural Narratives/K-12 (3)
Survey of multicultural literature suitable for the K-12 classroom. Cultural awareness, diversity, developmentally-appropriate materials, book and media selection for bilingual and English-language learners in grades K-12.

EDUC 556 Assessment in English as a Second Language (3)
Assessment of linguistically-diverse students, developing instructional plans for linguistically-diverse students, measurement, relevant research, classroom practice, legal and social responsibilities.

EDUCATION: SPECIAL EDUCATION (EDSE)

EDSE 496 Topics: (1-3)

EDSE 500 Foundation of Special Education Including Law (3)
Knowledge and skills needed in special education. An evolving discipline based on philosophies, evidence-based principles and theories, relevant laws and policies, diverse and historical viewpoints, and societal influences on the education and treatment of individuals with exceptional needs.

EDSE 501 Instructional Strategies in Special Education (3)
Overview of methodologies used in the instruction of students with special learning needs. Explores the purpose of an Individualized Education Program and its use as a guide in the development of a learning plan based on the student's learning characteristics including strengths, needs, and the impact of disability on his/her learning in the general education classroom. Prerequisite: EDSE 500.

EDSE 502 Behavioral Interventions for the Learner with Special Needs (3)
Focuses on research-based assessment and intervention strategies for working with students who present challenging behavior in the classroom. Prerequisites: EDSE 500 and EDSE 501.

EDSE 503 Methods of Teaching Students with Mild Disabilities Reading and Math (3)
Provides an understanding of the nature of reading and arithmetic and of challenges faced by children and adolescents with a wide array of exceptionalities. Major approaches to teaching and learning in reading and math. Development of diagnostic-prescriptive approaches. Prerequisites: EDSE 500 and EDSE 501.

EDSE 506 Educating Students with Low Incidence Disabilities in Inclusive Environments (3)
Examines types of low-incidence disabilities, including mental retardation, autism, physical disabilities, traumatic brain injury, deafness, blindness, multiple disabilities, and other health impairments, that affect academic and job performance. Current methods for teaching individuals with low-incidence disabilities. Prerequisites: EDSE 500 and EDSE 501.

EDSE 510 The Learner Who is Twice Exceptional, Including Gifted and Talented (3)
Provides tools to identify twice exceptional students and selection appropriate strategies so that gifted students with disabilities can learn at appropriate levels. Prerequisites: EDSE 500 and EDSE 501.

EDSE 515 Internship K-6 Elementary Practicum in Special Education (3)
Provides support in teaching and learning of elementary students. Integrated field supervision to achieve professional competencies. Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503, EDSE 506, and EDSE 510.

EDSE 520 Internship 6-12 Secondary Practicum in Special Education (3)
Provides support in teaching and learning of secondary students. Integrated field supervision to achieve professional competencies. Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503, EDSE 506, and EDSE 510.

EDSE 596 Topics: (1-3)

EDUCATION: TEACHER LEADERSHIP COGNATE (EDTL)

EDTL 510 Teacher Leadership I (2)
Development of an understanding of the role of instructional leader and change agent in today's PK-12 schools. Development of instructional leader skills and effective instructional knowledge base outlined in the Teacher Leader Model Content Standards. Includes mentoring, coaching, frameworks for effective teaching, engaging students, collegial conversations, constructive feedback systems, Professional Learning Communities.

EDTL 511 Teacher Leadership II (2)
Analysis of typical teaching problems. Examines best practices, action research, and facilitation skills. Prerequisite: EDTL 510. Corequisite: EDTL 526.

EDTL 512 Facilitation and Presentation (2)
Teacher Leaders working with teachers to improve student achievement. Explores facilitation of groups, from small teacher teams to the entire school community. Emphasis on equipping leaders with a variety of presentation skills to lead school change.

EDTL 513 Information Based Educational Practice and Statistics (3)
Exploration of standards-based educational practice. Analysis and interpretation of data as they inform educational practice. Data Driven Dialogues implemented as catalysts for educational change. Development of skills necessary to observe, analyze, and

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evaluate data from a multiple measures perspective. Foundational uses of educational statistics applied.

EDTL 517 Assessment Literacy (1)
Construction, administration and interpretation of formative and summative educational assessments for the systematic analysis of student learning and teaching practice. Validity, reliability and basic statistical analysis, as well as design of rubrics and other scoring approaches included. Corequisite: EDTL 526.

EDTL 518 Diversity and Differentiated Instruction (2)
Differentiated curriculum, assessment, and instruction, the latest brain research, and a mindset of diversity as a strength. Focuses on different learning populations including, but not limited to, Special Education, ESL, Gifted and Talented, Children of Poverty.

EDTL 525 Internship I (1)
Application of theory and research to the analysis and synthesis of field experiences in leadership. Structured on building and district level initiatives. Includes experiences that increasingly require full management of a project. Prerequisites: EDTL 510 and EDTL 512.

EDTL 526 Internship II (2)
Application of theory and research to the analysis and synthesis of field experiences in leadership. Structured on building and district level initiatives. Includes experiences that increasingly require full management of a project. Prerequisites: EDTL 510, EDTL 512, EDTL 513, and EDTL 525.

ELECTRICAL CONSTRUCTION (ELCE)

ELCE 100 Electrical Construction (4)
Tactics to plan electrical system installations from blueprints to the completed job and preparation of material lists, job sheets, and time schedules for various phases of construction. The course emphasizes the National Electrical Code.

ELCE 102 Electrical Blueprint Reading (4)
Development of skills needed to interpret electrical drawings properly. Critical for anyone involved in the design, construction, or maintenance of electrical systems.

ELCE 110 House Wiring (4)
Approaches to residential building wiring in conformance with the current National Electrical Code and local codes using non-metallic cable. Prerequisite: ELCE 100.

ELCE 120 Commercial Wiring (4)
Approaches to commercial and industrial building wiring in conformance with the current National Electrical Code and local codes using electric metallic tubing and other raceways. Prerequisite: ELCE 110.

ELCE 124 Electrical Safety (1)
Exploration of OSHA's electrical safety-related work practices, and how they are applied to the work environment.

ELCE 125 Electrical Principles and Applied Calculations (4)
Exploration of the fundamental principles of electrical calculations and operations, as well as practical applications of various concepts.

ELCE 130 National Electrical Code I (4)
Exploration of the National Electrical Code and local code requirements for electrical installations. Chapters one through four of the National Electrical Code are covered.

ELCE 135 National Electrical Code II (4)
Further development of material from ELCE 130 and covering chapters five through nine of the National Electrical Code, including hazardous locations, special occupancies, conditions, and equipment. Prerequisite: ELCE 130.

ELCE 144 Grounding and Bonding (1)
Exploration of technology and techniques available for code and standards-compliant grounding and bonding systems, focusing on grounding and bonding requirements as they relate to Article 250 and other articles of the NEC code.

ELCE 150 DC Circuit Fundamentals (4)
Introduction to the principles of DC electricity and magnetism with emphasis on Ohm's, Kirchoff's, and Watt's laws to analyze circuit voltage, current, and power. Addresses common measuring instruments and safety.

ELCE 155 AC Circuit Fundamentals (4)
Exploration of AC circuits including: resistance, current, voltage, computations of series and parallel circuits, circuit analysis, magnetism, inductive and capacitive circuits and troubleshooting with basic test equipment.

ELCE 167 Electrical Maintenance (4)
Introduction to common electrical repairs, electrical systems, tools and test equipment. Includes replacing or repairing devices, such as receptacles, light fixtures and ballasts, circuit breakers, fuses, and switches. Addresses electrical safety and code applications.

ELCE 169 Electrical Code Calculations (4)
Exploration of calculations used in the application of the National Electrical Code, emphasizing sizing of branch circuit and feeder conductors and calculating ratings of protective devices. Prerequisites: ELCE 130 and ELCE 135.

ELCE 215 Advanced Code Calculations (4)
Exploration of calculations for sizing conductors, conduits, fittings, protective devices, relays related to branch circuits, feeders for motor loads, transformers and power factor correction calculations. Prerequisite: ELCE 169.

ELCE 220 Industrial Controls (4)
Application of electrical and electromechanical sensing/control devices including heating, ventilating, and air conditioning applications, motor control, conveyor drives, and other industrial applications. Students design control systems to meet assigned

conditions, use principles of relay logic to prepare correct ladder diagrams and wire up, test, and troubleshoot their systems. Course stresses accuracy, safety, and National Electric Code requirements.

ELCE 222 Instrumentation and Process (4)
Investigation of theory of industrial instrumentation measurement through process control. Includes theory and measurement methods for temperature, pressure, level, and flow. Incorporates hands-on training equipment to measure temperature and pressure, and perform calibration of a pressure differential transmitter. Test equipment is used to simulate a two-wire transmitter and source a current signal for calibration of an I/P transducer.

ELCE 225 Introduction to PLCs (4)
Development of the ability to read, interpret, and analyze electrical ladder drawings. Acquaints the student with the basic electromechanical components commonly used in electrical control circuits, as well as solid-state relays and the role of programmable controllers.

ELCE 229 AC/DC Variable Speed Drive (2)
Introduction to variable speed drive technology that offers a cost-effective method to match driver speed to load demands. Represents a state-of-the-art opportunity to reduce operating costs and improve overall productivity. Focuses on variable speed drive technology including operation, set-up, troubleshooting, maintenance, proper selection, and application for drives, as well as basic drive overview and comparison.

ELCE 263 Specific Wiring for Structured Cabling Systems (2)
Development of ability to wire for specifications and for structured cabling systems. Examines the job layout, products used, and execution of the project.

ELECTRIC LINEWORKER (ELCL)

ELCL 120 Fundamentals of Electricity (4)
Generation, transmission, and distribution of electricity beginning with the electron and its function of transporting electric power to homes and industry.

ELCL 125 Job Training and Safety (2)
Covers first aid, CDL, basic use and care of personal protective equipment use and care of climbing equipment, daily inspection and basic use of motorized equipment.

ELCL 131 Electrical Distribution Theory I (4)
Pole setting techniques, framing methods and specifications, climbing, sagging and splicing of conductors, energizing and de-energizing of lines, and installation of protective grounds.

ELCL 131L Electric Distribution Lab (4)
Examination of the National Electric Safety Code, equipment operation, material records, knot tying, installation of protective grounds, pole climbing, replace insulators, replacing crossarms, conductor ties, and overhead line construction.

ELCL 132 Electrical Distribution Theory II (4)
ELCL 132L Electrical Distribution Theory II Laboratory (2)
Installation and operation of protective equipment, transformer hookups, voltage regulation, hotstick maintenance, troubleshooting, and gloving from the pole. Four hours lecture, three hours laboratory per week. Prerequisite: ELCL 131.

ELCL 137 Advanced Electrical Distribution (2)
ELCL 137L Advanced Electrical Distribution Laboratory (4)
Meter safety, connector installation, street lighting, rubber cover up, and public relations. Two hours lecture, eight hours laboratory per week.

ELCL 140 Underground Procedures (4)
ELCL 140L Underground Procedures Laboratory (2)
Safety practices, terminology, fault finding, cable locating, switching procedure, installation of terminal devices, splicing, and transformer application. Five hours lecture, four hours laboratory per week.

ELCL 145 Hot Line Procedures (1)
ELCL 145L Hot Line Procedures Laboratory (2)
Two weeks of training by outside specialists covering current hotline maintenance and underground installation methods. Eight hours lecture, twenty-four hours laboratory per week.

ELCL 195 Independent Study (1-2)

ELCL 196 Topics (1-2)

ELCL 199 Internship (6)
Opportunity for an individual to be employed for training by a utility company while maintaining his/her status as a Colorado Mesa University student. Provides excellent on-the-job training benefits. Students usually selected for this course by formal interview. Prerequisite: consent of instructor. Eighteen hours per week, two semesters after completion of regular program.

EMERGENCY MANAGEMENT (EMDP)

EMDP 211 Introduction to Emergency Management (3)
Introduction to the complex and evolving field of emergency management. Understanding of key stakeholders, principles, and activities involved in an all-hazards, all-phases approach to dealing with disasters developed. Prerequisite: Consent of instructor.

EMDP 321 Hazard Preparedness and Mitigation (3)
Examination of methods and application of practices in preparing for and

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mitigating against hazards. Includes developing an understanding of risk and vulnerability, and their relationship with public policy and implementation actions relevant to hazard preparedness and mitigation. Prerequisite: EMDP 211.

EMDP 331 Disaster Response and Recovery (3)
Examination of practices and principles that promote effective disaster response and recovery operations. Review of popular myths and realities regarding human behavior in catastrophic events in addition to divergent approaches for disaster management. Includes developing an understanding of the Incident Command System, National Incident Management System, and emergency operations centers. Prerequisite: EMDP 211.

EMERGENCY MEDICAL TECH (EMTS)

EMTS 101 Emergency Medical Technician - Basic I (3)
Policies, rules and regulations of emergency medical services. Basic anatomy and physiology. Initial and focused assessment of patient in the field. Corequisites: EMTS 102 and EMTS 103.

EMTS 102 Emergency Medical Technician - Basic II (3)
Management of respiratory, cardiac, CNS, endocrine, behavioral, drug, alcohol, allergy and anaphylaxis emergencies. Airway management, CPR, AED and basic pharmacology. Corequisites: EMTS 101 and EMTS 103.

EMTS 103 Emergency Medical Technician - Basic III (4)
Management of MOI, head, spinal, abdominal, chest and extremity trauma. Basic management of pediatric, gynecologic, and geriatric emergencies. EMT safety, environmental emergencies, hazmat, triage, and incident command. Preparation for national registry written and practical examination. Corequisites: EMTS 101 and EMTS 102.

EMTS 115 Emergency Medical Responder (3)
This course covers the knowledge and skills to provide emergency care for most medical emergencies. Emergency Medical Responders provide immediate care as part of the EMS system while awaiting additional EMS response and transportation. This course meets the requirements to become nationally certified as an NREMR - National Registered Emergency Medical Responder.

EMTS 130 Emergency Medical Technician - Basic IV Therapy (2)
Focuses on cognitive and skill practice as required by Colorado Prehospital Care program for EMT-Basic level IV approval. Examines criteria, procedures and techniques for IV therapy, discusses fluid and electrolyte balance and principles and treatment for shock.

EMTS 190 Emergency Medical Technician - Basic EKG Interpretation (2)
Interpretation of EKG strips, anatomy and physiology of the heart, using three-lead monitoring as a guide. Introduction to twelve-lead EKG.

EMTS 196 Topics: (1-3)

EMTS 225 Fundamentals of Paramedic Practice (3)
First course of the National Standard Paramedic Curriculum as approved by the Colorado State Department of Health and Environment. Corequisite: EMTS 225L.

EMTS 225L Fundamentals of Paramedic Practice Laboratory (2)
Hands-on application of patient assessment, IV therapy and EKG interpretation. Practical application and mastery of anatomy and physiology principles within a pre-hospital setting will be developed. Prerequisite: Permission of Instructor. Corequisite: EMTS 225.

EMTS 227 Paramedic Special Considerations (3)
Focuses on a comprehensive study of Advanced Life Support Practice. Corequisite: EMTS 227L.

EMTS 227L Paramedic Special Considerations Laboratory (2)
Hands-on application of skills in pediatric assessment, delivery and management of the newborn, the mother, and geriatric patients. Management of live scenarios simulating patients with special considerations and needs will enhance the development of practical patient care skills and improve patient outcomes. Certification in PEPP and PALS will be completed. Prerequisites: EMTS 225/225L and Permission of Instructor. Corequisite: EMTS 227.

EMTS 229 Paramedic Pharmacology (3)
Focuses on a comprehensive study of emergency pharmacology and medications used to treat common illnesses. Corequisite: EMTS 229L.

EMTS 229L Paramedic Pharmacology Laboratory (2)
Hands-on administration of medications with an advanced level of understanding of their effects to the human body. The principles of pharmacokinetics and pharmacodynamics are investigated. Prerequisites: EMTS 225/225L and Permission of Instructor. Corequisite: EMTS 229.

EMTS 231 Paramedic Cardiology (5)
Cardiology topics as presented in the National Standard Curriculum for paramedics. Corequisites: EMTS 231L.

EMTS 231L Paramedic Cardiology Laboratory (1)
Hands-on application of principles of cardiac care for the pre-hospital and in-hospital environment. Students will earn their ACLS certification. Prerequisites: EMTS 225/225L and Permission of Instructor. Corequisite: EMTS 231.

EMTS 233 Paramedic Medical Emergencies (4)
A comprehensive study of adult medical emergencies. Corequisite: EMTS 233L.

EMTS 233L Paramedic Medical Emergencies Laboratory (1)
Hands-on application of the principles of endocrine emergencies, BG analysis,

respiratory emergencies, and other medical emergencies for the pre-hospital and in-hospital environment. Students will receive AMLS certification. Prerequisites: EMTS 225/225L and Permission of Instructor. Corequisite: EMTS 233.

EMTS 235 Paramedic Trauma Emergencies (4)
A comprehensive study of adult and pediatric trauma emergencies. Prerequisites: EMTS 225/225L and Permission of Instructor. Corequisites: EMTS 235L.

EMTS 235L Paramedic Trauma Emergencies Laboratory (1)
Hands-on application of the principles to manage and assess the trauma patient in pre-hospital emergencies. Approaches on how to handle the patient with blast injuries and disaster management of multiple patients will be developed. Specific scenarios with various acute trauma emergencies will be developed to assist the student with patient assessment skills. Prerequisites: EMTS 225/225L and Permission of Instructor. Corequisite: EMTS 235.

EMTS 237 Paramedic Internship Preparation (2)
Reviews concepts and techniques used in the prehospital setting. Prerequisites: EMTS 225/225L, EMTS 227/227L, EMTS 229/229L, EMTS 231/231L, EMTS 233/233L, and EMTS 235/235L.

EMTS 280 Paramedic Internship I (6)
The preceptor/internship program for paramedic students. Prerequisite: EMTS 237.

EMTS 281 Paramedic Internship II (6)
Continuation of EMTS 280, preceptor program for paramedic students. Prerequisite: EMTS 280.

ENERGY MANAGEMENT (EMGT)

EMGT 101 Energy Management Fundamentals (3)
Introduction to basic concepts of energy management.

EMGT 196 Topics: (1-3)

EMGT 201 Land Management Fundamentals (3)
Introduction to basic concepts of land management and practices.

EMGT 296 Topics: (1-3)

EMGT 340 Energy Industry Fundamentals (3)
Provides energy literacy through a survey of the sources, distribution and uses of energy, including the evolution of energy from wood fires to coal to oil to the current mix of coal, oil, natural gas, nuclear, hydroelectric, wind, geothermal, biomass, solar and ocean currents and tides. Future energy policy, sources, uses and case studies will be discussed as well as alternative energy sources. Prerequisites: GEOL 111/111L, and CHEM 121/121L.

EMGT 350 Energy Development, Transportation, and Markets (3)
Overview of the energy industry domestic and worldwide. Basic energy industry drilling and production terminology, concepts and terms introduced and utilized throughout the course. Issues surrounding business models, upstream, midstream and downstream discussed in detail. Prerequisites: GEOL 111/111L, and FINA 301.

EMGT 355 Landman Geo-Petro-Engineering (3)
Petroleum engineering fundamentals. Properties of reservoir rock, single phase fluid flow through porous media, surface forces, fluid saturation, and completion technology. Evaluation of petroleum reservoir field data. Prerequisites: EMGT 101 and EMGT 201.

EMGT 360 Real Property, Oil and Gas Law (3)
The body of case law surrounding oil and gas leases and leasehold interests, mineral titles, concurrent ownership and split estates, and governmental regulation of mineral development, including pooling and unitization of oil and gas leases. Prerequisite: EMGT 340.

EMGT 410 Energy Regulation and Compliance (3)
The body of law surrounding governmental regulation of mineral development, including environmental liability, diligent and prudent operations, contractual risk allocation, and regulatory case studies. Prerequisite: EMGT 340.

EMGT 440 Energy Land Practices I (3)
Overview of the supply and demand for energy. The physical path of energy from source to user, transportation issues pertaining to energy, energy pricing methodologies, energy markets, and risk control through the use of derivatives in the energy industry. Prerequisites: EMGT 340 and FINA 301.

EMGT 450 Energy Land Practices II (3)
Imparts mastery of the fundamental concepts and terminology related to real property law. Application of concepts to situations occurring in the energy environment as land is found, purchased and developed for use. Prerequisite: EMGT 340.

EMGT 494 Energy Senior Seminar (3)
Legal, economic, environmental, and national secruity issues surrounding the energy industry. Alternative energy sources and other current issues in energy management. Prerequisite: EMGT 340.

EMGT 495 Independent Study (1-3)

EMGT 496 Topics (1-3)

EMGT 499 Internship (1-9)

ENGINEERING (ENGR)

In order to take any of the following courses, each listed prerequisite (or an equivalent course) must be completed with a grade of "C" or better. The instructor may waive the prerequisite.

ENGR 101 Introduction to Engineering (1)
Facets of engineering. Includes history of the profession, mechanical engineering and mechanical technology

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

curriculum, industries in which engineers practice, and expectations and tools for academic success. Introduces engineering tools used in later courses. Hands-on experiences, visiting industry, oral presentations, meeting faculty and practicing professions.

ENGR 125 Computer-Aided Design and Fabrication (3)
Introduces engineering design graphics. Includes learning a contemporary computer-aided design (CAD) software application and relevant engineering graphics concepts, such as orthographic projection, sections, engineering drawing practices, geometric dimensioning and tolerancing, and an introduction to manufacturing methods. Entails a final design project using rapid prototyping.

ENGR 140 First-Year Engineering Project (3)
Provides first-year engineering students with the opportunity to apply mathematic and scientific skills in interdisciplinary engineering projects. Students work in teams to design and build engineering projects under the guidance of engineering faculty. Prototype projects are exhibited at an end-of-semester design expo. Prerequisite: MATH 119 or higher.

ENGR 196 Topics: (1-3)

ENGR 224 Materials Science (2)
ENGR 224L Materials Science Laboratory (1)
Structure, properties, and processing of metallic, polymeric, ceramic, and composite materials. Perfect and imperfect solids; phase equilibria; transformation kinetics; mechanical behavior; material degradation. Approach incorporates both materials science and materials engineering components. Prerequisites: CHEM 131/131L and PHYS 131/131L.

ENGR 225 Introduction to Manufacturing (3)
Principles, processes, and problems associated with the conversion of engineered materials into useful goods. Fundamentals of geometric specification, casting, machining, plastic deformation, bulk deformation, joining processes, and additive processes for metals, plastics, ceramics, and composites. Prerequisite: ENGR 224.

ENGR 261 Statics and Structures (3)
Covers statics of particles, equivalent force systems, rigid bodies, equilibrium of rigid bodies in two and three dimensions, analysis of truss and frame structures, uniaxially-loaded members, deformation and stress, distributed force systems, friction. Lectures and homework assignments involve computer work and hands-on laboratory work documented by written reports. Prerequisites: MATH 136 or MATH 152, and PHYS 131/131L.

ENGR 263 Mechanics of Solids (3)
Covers shear force and bending moment, torsion, stresses in beams, deflection of beams, matrix analysis of frame structures, analysis of stress and strain in 2-D and 3-D (field equations, transformations), energy methods, stress concentrations, and columns. Lectures and homework assignments involve computer work and hands-on laboratory work documented by written reports. Prerequisite: ENGR 261.

ENGR 305 Engineering Economics & Ethics (2)
Applications of economics, statistics, and ethics for mechanical engineers. Topics include cost concepts and design economics, money-time relationships, and comparison of alternatives. Engineering ethics includes personal vs. professional ethics, ethical problem-solving techniques, rights and responsibilities of engineers, and whistle-blowing. Prerequisites: ENGR 101, ENGR 140, and MATH 119, MATH 135, or MATH 151.

ENGR 312 Engineering Thermodynamics (3)
An introductory course in thermodynamics, the science of heat energy conversion. Develops understanding of energy, heat, work, efficiency, and ideal thermodynamic cycles. Teaches first and second laws of thermodynamics and perfect gas law. Prerequisites: MATH 136 or MATH 152, and PHYS 131/131L.

ENGR 317 Fundamentals of Circuits and Electronics (2)
ENGR 317L Fundamentals of Circuits and Electronics Laboratory (1)
Introduction to resistive circuits, capacitors, inductors, transient analysis, sine waves, AC circuit analysis, resonance, and transformers. Prerequisites: MATH 136 or MATH 152, and PHYS 131/131L. Corequisite: ENGR 317.

ENGR 321 Fluid Mechanics (3)
Covers fluid properties, laws of fluid statics and fluid dynamics, measurement of flow, viscous flow, laminar and turbulent flow, flow in ducts, forces due to fluid motion, and fluid machinery. Prerequisites: MATH 152 or MATH 136, and PHYS 131/131L.

ENGR 325 Component Design (3)
Knowledge and skills developed in preceding courses are extended and applied to design and selection of machine elements and machines. Attention is given to functional requirements, methods of manufacture, choice of materials and economic factors. Prerequisites: ENGR 224 and ENGR 263.

ENGR 336 Heat and Power (3)
Discussion of major modes of heat transfer. Includes steady and transient conduction, internal and external convection, and radiation with emphasis on industrial applications. Heat exchanger and boiler analysis and related codes and standards discussed. Prerequisites: ENGR 312 and ENGR 321.

ENGR 343 Dynamics (3)
Kinematics of particles and rigid bodies. Kinetics of particles and rigid bodies in plane motion, including Newton's second law, work and energy, impulse and momentum. Prerequisite: ENGR 261.

ENGR 345 Engineering Integration I (3)
First course in a design sequence integrating concepts from the mechanical engineering technology curriculum. Emphasis on laboratory experience and the design, analysis,

and testing of mechanical systems. Team project work on "design-and-build" projects will require manufacture of mechanical systems and/or electronic circuits. Prerequisites: ENGR 224, ENGR 263, MAMT 106, and CSCI 130.

ENGR 353 Exploring Entrepreneur Opportunities (3)
Introduction to innovation and opportunity recognition, including development of business ideas, business model validation and business feasibility analysis.

ENGR 385 Engineering Integration II (3)
Second course in a design sequence integrating concepts from the mechanical engineering technology curriculum. Emphasis on laboratory experience and the design, analysis, and testing of mechanical systems. Team project work on "design-and-build" projects will require manufacture of mechanical systems and/or electronic circuits. Prerequisite: ENGR 345.

ENGR 395 Independent Study (1-3)

ENGR 396 Topics (1-3)

ENGR 397 Structured Research (1-3)

ENGR 399 Internship (1-12)

ENGR 401 Professionalism Seminar (1)
Preparation for a career in the engineering profession. Topics in professionalism, ethics, resume building, innovation, internships, and current engineering issues explored. Prerequisite: junior standing or higher.

ENGR 425 Advanced Manufacturing (3)
Use of cutting edge materials and emerging capabilities that utilize the coordination of information, automation, computation, software, sensing and networking. Includes discussion of product data management, flexible manufacturing, manufacturability, and product life-cycle management. Prerequisites: ENGR 225, ENGR 305, and STAT 305.

ENGR 426 Manufacturing Processes and Systems (3)
A senior level course that examines widely used manufacturing processes for metals, polymers, microelectronics and also exposes students to principles and practices of world class manufacturing. Lecture topics include material properties; engineering materials; casting, molding and related processes; metal forming and sheet metal working; material removal processes; joining and assembly processes; electronics manufacturing technology; and principles and practices of world class manufacturing. Manufacturing economic considerations. Influence of product design on process selection. Prerequisites: ENGR 224 and STAT 200.

ENGR 427 Engineering Measurements (2)
Methods of experimentation and data analysis. Specific skills used in planning an experiment, applying sound procedures, keeping proper records, and communicating results orally, with posters and in written reports developed. Prerequisites: ENGR 263, ENGR 317, STAT 305, and ENGL 325.

ENGR 435 Industrial Controls (3)
Fundamentals of control of manufacturing processes. Applications of relay logic, input/output devices, and programmable logic controllers (PLC). Design of complete control circuits, selection of components, and cost estimation. PLC programming for discrete event control and for analog applications. Prerequisite: ENGR 317.

ENGR 436 Fluid & Electric Power Systems (3)
A mechanical approach to industrial power systems. Applications emphasize the selection and function of hardware and interfacing of hydraulic, pneumatic and electric systems with mechanical, fluidic and electrical/electronic controls. Topics covered include transformers, motors, generators, motor controls, and protective devices. Prerequisites: ENGR 321 and ENGR 435.

ENGR 445 MET Design Project I (3)
The first of a two-course comprehensive group capstone design experience, focusing on the design proposal. This sequence applies material from prior course work, along with concepts of project management, problem definition; determining design requirements, design optimization, engineering analysis, proof-of-concept prototype, CAD drawings. Students make several oral design reviews, a final design presentation, and prepare a written report. Prerequisites: ENGR 140, ENGR 312, ENGR 321, ENGR 325, MAMT 115, and ENGL 325.

ENGR 446 Writing for Design Projects (1)
Communication of professional writing to the technical and non-technical audience. Skills are developed to analyze rhetorical situations and compose documents that achieve a specific purpose and meet the needs of a particular audience. Writing with clarity, conciseness and correctness will be emphasized. Corequisite: ENGR 485.

ENGR 455 Fluid Power Systems (3)
Coverage of the fundamentals of hydraulic and pneumatic systems and their components, fluid power circuit design, analysis, and troubleshooting for industrial applications, introduction to electro-pneumatics. Prerequisite: ENGR 321.

ENGR 460 Energy Systems (3)
Discussion of conventional, alternative and renewable energy systems, such as wind, solar, clean coal, and geothermal. Challenging energy problems relevant to the industry presented and analyzed. Prerequisites: ENGR 312 and ENGR 321.

ENGR 465 Electric Power Systems (3)
Basic understanding of electric power systems; generation, transmission, distribution and consumption. Review of AC circuit analysis in single and three phase systems using time domain and phasor representation. Includes magnetic circuits, transformers and renewable energy generation from photovoltaic cells. Introduces electromechanical energy conversion from experiments with induction and synchronous motors/generators, and includes photovoltaic panels. Prerequisite: ENGR 317.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

ENGR 481 Thermal-Fluid Systems Analysis Using CFD (3)
Presentation of advanced computer simulation tools for analysis of thermal-fluid problems (fluid mechanics, thermodynamics, and heat transfer). Fundamentals of CFD (computational fluid dynamics) such as grid generation, solution techniques and convergence, modeling and simulation, and analysis of results for representative industrial problems discussed. Prerequisites: CSCI 130 and ENGR 336.

ENGR 485 MET Design Project II (3)
Second part of a two-course capstone design experience. Refinement of prototype, design optimization, fabrication, testing and evaluation. Students orally present the final design, prepare a written report and operation manual for the product. Prerequisite: ENGR 445.

ENGR 495 Independent Study (1-4)

ENGR 496 Topics (1-3)

ENGR 497 Structured Research (1-3)
Engineering research under the direct guidance of a faculty member. Designed for junior and senior level students. Prerequisite: instructor permission.

ENGLISH-BASIC WRITING (ENGC)

ENGC 090 College Preparatory Reading and Composition (3)
This course uses whole language to develop proficiency in reading and writing for college. Emphasis is placed on applying analytic and critical reading skills in a variety of texts and on introducing the writing process. Upon completion, students should be able to recognize and use various patterns of text organization and compose effective paragraphs and essays. This course integrates ENGL 060/090 and READ 060/090. Successful completion of this course will prepare students to take college level essential learning courses in conjunction with a co-requisite reading/writing studio (READ 092/ENGC 092).

ENGC 092 Writing Studio (1)
This course is designed to offer supplemental support for students in ENGL 111 and writing intensive courses across the disciplines. This is a corequisite with ENGL 111 or social science 100 discipline strands for students with Accuplacer scores less than 70.

ENGC 094 Reading & Writing Essentials (2)
Introduction to critical thinking as students explore reading and writing for specific purposes and audiences. Students develop skills required for college-level writing while applying strategies for improving comprehension, developing vocabulary, and increasing speeed for reading college textbooks. Successful completion of this course will prepare students for college-level general education courses with a corequisite reading/writing studio. Corequisite: ENGL 090. This course is for the students that fall below the index score of 80.

ENGC 096 Topics: (1-4)

ENGLISH (ENGL)

✓ **ENGL 111 English Composition-GTCO1 (3)**
Introduction to writing as a process with an emphasis on achieving rhetorical purpose. Prerequisite: Students who do not meet placement criteria will be assigned to ENGL 090 and must pass that class with a "C" or higher to enroll in ENGL 111.

✓ **ENGL 112 English Composition-GTCO2 (3)**
The practice of academic writing that extends one's own thinking in response to the ideas of others. Prerequisite: ENGL 111 with a grade of "C" or higher to fulfill English Competency requirement under Essential Learning.

✓ **ENGL 131 Western World Literature I-GTAH2 (3)**
Works from the Classical, Medieval, and Renaissance periods.

✓ **ENGL 132 Western World Literature II-GTAH2 (3)**
Works from the late Renaissance, Neoclassic, Romantic, and Modern periods.

✓ **ENGL 150 Introduction to Literature-GTAH2 (3)**
Study of major genres of literature.

ENGL 196 Topics (1-3)

ENGL 210 Introduction to Literary Studies (3)
Introduction to the theory and practice of studying literature. Prerequisite: ENGL 111.

✓ **ENGL 219 Introduction to Professional Writing-GTCO3 (3)**
Study of technical writing, public information and public relations writing, and free-lance nonfiction writing. Prerequisite: ENGL 112.

✓ **ENGL 222 Mythology-GTAH2 (3)**
Basic myths of the Greeks and Romans, the cultures that produced them and/or the Northern and Medieval myths of Europe, their backgrounds in classical culture and native folklore.

✓ **ENGL 231 Non-Western World Literature I-GTAH2 (3)**
Literature from cultures outside the Western tradition, from antiquity to approximately 1800. Texts, chosen by instructor, may include works from China, Japan, India, the Middle East, etc.

✓ **ENGL 232 Non-Western World Literature II-GTAH2 (3)**
Nineteenth and twentieth century literature from Eastern, Indian, African, Asian and Latin American tradition.

ENGL 240 Children's Literature (3)
Survey of literature for children from birth to age 12, focusing on ways of reading texts.

ENGL 245 Imaginative Writing (3)
Introduction to the theory and practice of imaginative writing for young people. Prerequisite: ENGL 111.

ENGL 250 Introduction to Creative Writing (3)
An introduction to the theory and practice of producing original works of poetry, fiction, and non-fiction prose. Prerequisite: ENGL 111.

✓ **ENGL 254 Survey of English Literature I-GTAH2 (3)**
English literature from its beginnings through the Enlightenment.

✓ **ENGL 255 Survey of English Literature II-GTAH2 (3)**
English literature from the Romantics to the present day.

✓ **ENGL 261 Survey of American Literature I-GTAH2 (3)**
American literature from the beginnings to the late 19th Century.

✓ **ENGL 262 Survey of American Literature II-GTAH2 (3)**
American literature from the late 19th Century to the present.

ENGL 296 Topics (1-3)

ENGL 301 Classical Greek and Latin Literature (3)
Readings in English of Greek and Roman authors and major classical genres. Prerequisite: ENGL 112.

ENGL 311 English Medieval Literature (3)
Major works of Old and Middle English literature. Prerequisite: ENGL 112.

ENGL 313 English Renaissance Literature (3)
Major works of the 16th and 17th Centuries, including the Metaphysical and Caroline poets and John Milton. Prerequisite: ENGL 112.

ENGL 314 American Literature to 1830 (3)
An in-depth study of various significant texts of the period, as well as other relevant texts. Texts and authors are chosen by the instructor to provide a thorough study of selected important historical, philosophical and literary aspects of the period. Prerequisite: ENGL 112.

ENGL 315 American Literature 1830-1870 (3)
An in-depth study of various significant texts of the period, as well as other relevant texts. Texts and authors are chosen by the instructor to provide a thorough study of selected important historical, philosophical and literary aspects of the period. Prerequisite: ENGL 112.

ENGL 316 American Literature 1870-1900 (3)
An in-depth study of various significant texts of the period, as well as other relevant texts. Texts and authors are chosen by the instructor to provide a thorough study of selected important historical, philosophical and literary aspects of the period. Prerequisite: ENGL 112.

ENGL 320 Report and Proposal Writing (3)
Introduction to the theory and practice of preparing and analyzing reports and proposals intended for businesses, governmental agencies, private and corporate foundations. Prerequisite: ENGL 112.

ENGL 325 Writing for Engineers (3)
Development of a set of communication tools by learning how to compose, design, and edit technical documents for the engineering professions. Topics include technical documentation (lab reports, designing of reports, proposals), professional correspondence (emails, memo reports, and team meetings), and verbal and graphical communication of technical data.

ENGL 330 Women in World Thought and Literature (3)
Readings in world literature by and about women; interdisciplinary study of feminist theories and women's contributions to world thought. Prerequisite: ENGL 112.

ENGL 335 The Bible as Literature (3)
A survey of Biblical literature in literary and historical contexts. Includes the Hebrew Bible/Old Testament, the New Testament, and non-canonical Biblical literature. Prerequisite: ENGL 112.

ENGL 343 Language Systems and Linguistic Diversity (3)
Introduction to the nature of language, first and second language acquisition, and issues relevant to linguistic diversity and multicultural literacies. Prerequisite: ENGL 112.

ENGL 355 Shakespeare (3)
Early and mature plays, including genres of comedy, history, tragedy, and romance, emphasizing close textual reading in conjunction with cultural and intellectual contexts. Prerequisite: ENGL 112.

ENGL 365 Literature for Young Adults (3)
Advanced study of major works for youth and adolescents throughout history, with an emphasis on contemporary authors. Prerequisite: ENGL 112.

ENGL 370 Major Author (3)
In-depth study of one or two important writers, with attention to the writer's distinctive style and subject matter, the range of the writer's career, and the influence of the writer's work. Prerequisite: ENGL 112.

ENGL 380 Memoir and Creative Non-Fiction (3)
Theory and practice of the memoir and the personal essay. Emphasis on narrative craft, experiential expression, research, and interviewing. Prerequisite: ENGL 250.

ENGL 381 Creative Writing: Fiction (3)
Theory and practice of producing original works of fiction. Prerequisites: ENGL 250 or consent of instructor.

ENGL 382 Creative Writing: Crafting Fiction (3)
In-depth focus on a specialized aspect of fiction writing. Prerequisite: ENGL 250 or consent of instructor.

ENGL 383 Creative Writing: Poetry (3)
Theory and practice of producing original works of poetry. Prerequisites: ENGL 250 or consent of instructor.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

ENGL 384 The Art of the Essay (3)
Theory and practice of objective non-fiction, including expository and persuasive writing. Emphasis on style, structure, and audience. Prerequisite: ENGL 250 or consent of instructor.

ENGL 385 Technical and Professional Writing (3)
Practice in writing and editing of workplace documents, including correspondence, reports and proposals. Prerequisite: ENGL 112.

ENGL 386 Roots of Modern Rhetoric (3)
A survey of the history of rhetoric from classical Greece to the present with emphasis on the Greco-Roman tradition. Prerequisite: ENGL 112.

ENGL 387 Literary Editing and Publishing (3)
Practical experience in literary editing and publishing one of Colorado Mesa University's journals. Prerequisite: ENGL 250 or consent of instructor.

ENGL 388 Creative Writing: Crafting Poetry (3)
In-depth focus on a specialized aspect of poetry writing. Prerequisite: ENGL 250 or consent of instructor.

ENGL 390 Introduction to Film Studies (3)
Introduction to film narrative, cinematography, and theory. Prerequisite: ENGL 112.

ENGL 394 Technical and Professional Writing Topics (3)
Topics at the discretion of the instructor, or to meet the needs of the department. Topics may include: grant writing for industry; professional editing; desktop publishing for professional writing; writing for online presentation; individual and team writing. Prerequisite: ENGL 112.

ENGL 395 Independent Study (1-3)
Prerequisite: ENGL 112.

ENGL 396 Topics (1-3)
Prerequisite: ENGL 112.

ENGL 397 Practicum (3)
Experience in a Basic Writing classroom helping the instructor with all phases of writing instruction. Prerequisite: ENGL 250 or consent of instructor.

ENGL 398 Practicum in Editing and Publishing (1-3)
Experience in editing and publishing one of Colorado Mesa University's journals. Credit hours contracted through advising instructor. Prerequisite: ENGL 112.

ENGL 415 American Folklore (3)
Explores folk expressions of values, beliefs, traditions, attitudes, and worldviews. Prerequisite: ENGL 112.

ENGL 421 Introduction to Literary Theory and Criticism (3)
Development and theory of literary criticism. Prerequisite: ENGL 210.

ENGL 423 Genre Studies (3)
History and development of an individual literary genre. Prerequisite: ENGL 112.

ENGL 425 Scientific Writing (3)
Theoretical and practical studies of writing in the sciences (science, medicine, and environmental writing). Addresses writing for both popular and professional audiences. Coverage of both print and online instructional materials. Safety, ethical and liability issues. Prerequisite: ENGL 112 or 45 credit hours.

ENGL 427 Writing for Industry (3)
Theoretical and practical studies of writing for industrial fields. Addresses writing for both popular and professional audiences. Covers both print and online instructional materials. Safety, ethical, and liability issues. Prerequisite: ENGL 112 or 45 credit hours.

ENGL 435 American Literature 1900-1945 (3)
An in-depth study of various significant texts of the period, as well as other relevant texts. Texts and authors are chosen by the instructor to provide a thorough study of selected important historical, philosophical and literary aspects of the period. Prerequisite: ENGL 112.

ENGL 436 American Literature 1945-Present (3)
An in-depth study of various significant texts of the period, as well as other relevant texts. Texts and authors are chosen by the instructor to provide a thorough study of selected important historical, philosophical and literary aspects of the period. Prerequisite: ENGL 112.

ENGL 438 Ethnic Experiences in U.S. Literature (3)
Survey of literary works written throughout United States history by African-American, Hispanic-American, Native American and Asian American authors, as well as by authors from other under represented cultural communities. Prerequisite: ENGL 112.

ENGL 440 History of the English Language (3)
Historical development of the English language; its internal formation as shaped by external political, social, and intellectual forces. Prerequisite: ENGL 112 and Junior standing, or consent of instructor.

ENGL 451 Understanding and Using English Grammar (3)
The art of using English grammar effectively for written and spoken communication. Prerequisites: ENGL 112 and Junior standing, or consent of the instructor.

ENGL 470 18th Century British Literature (3)
Conceptual framework of the Enlightenment in England's representative writers. Prerequisite: ENGL 112.

ENGL 471 British Romanticism (3)
Exploration of the poetry, prose, and drama of the Romantic period in Britain. Text and authors are chosen by the instructor to provide a thorough study of selected historical, philosophical and literary aspects of the period. Prerequisite: ENGL 112.

ENGL 475 Victorian Literature (3)
Representative works of post-Romantic British literature. Prerequisite: ENGL 112.

ENGL 478 20th Century British Literature (3)
Major works from 20th Century British writers. Prerequisite: ENGL 112.

ENGL 491 Composition Theory and Practice (3)
Theory and practice of composing as it applies to teaching English in the junior and senior high schools; historical context, contemporary theory, and current pedagogy in the field of composition studies. Prerequisites: senior standing in teacher certification program or consent of instructor.

ENGL 492 Seminar in Writing (3)
Capstone course focusing on genre choice (novel, short story, poetry, memoir, creative non-fiction, screenplay, playwriting). Research into professional and publishing considerations. Development of a creative portfolio. Prerequisites: ENGL 210, ENGL 250, and Junior standing, or consent of instructor.

ENGL 494 Seminar in Literature (3)
Analysis of an important literary work or works, requiring students to interpret, criticize, and present research. Prerequisite: ENGL 210 and Senior standing, or consent of instructor.

ENGL 495 Independent Study (1-3)
Prerequisite: ENGL 112.

ENGL 496 Topics (1-3)
Prerequisite: ENGL 112.

ENGL 497 Internship in Business, Technical, and Professional Communication (3)
An opportunity to write, edit, and design business and technical documents in a professional setting. Projects may include reports, proposals, grants, manuals, brochures and newsletters. Prerequisite: Senior standing or consent of instructor.

ENGL 499 Internship (1-12)

ENGL 521 Seminar in Literary Theory (3)
Study of the content and application of literary theoretical frameworks.

ENGL 543 Language Systems and Linguistic Diversity (3)
Advanced study in the nature of language, first and second language acquisition, and issues relevant to linguistic diversity and multicultural literacies. Discussions will focus on education within and across home, community, and school contexts, including a focus on home-school-community relationships. Prerequisite: Bachelor's degree.

ENGL 550 Studies in Creative Writing (3)
Studies in the history, development, theory, and practice of creative writing with an emphasis on understanding genre.

ENGL 554 Topics in British and Commonwealth Literature (3)
Analysis of an important British or Commonwealth literary work or works requiring students to interpret, criticize, and present research.

ENGL 561 Topics in American Literature (3)
Analysis of an important American literary work or works requiring students to interpret, criticize, and present research.

ENGL 586 Seminar in Rhetoric and Composition (3)
Theory and practice of rhetoric and composition including historical contexts, contemporary theories and current pedagogy.

ENGL 596 Topics (1-3)
Prerequisite: Bachelor's degree.

ENTREPRENEURSHIP (ENTR)

ENTR 196 Topics: (1-3)

ENTR 296 Topics: (1-3)

ENTR 300 Small Business and Entrepreneurship (3)
Aspects of management uniquely important to small business firms; the economic and social environment in which they function.

ENTR 340 Applied Financial Management for Emerging Businesses (3)
Overview of basic accounting and finance concepts for non-business majors owning or employed by small business/entrepreneurial ventures.

ENTR 343 Exploring Entrepreneur Opportunities (3)
Introduction to innovation and opportunity recognition, including development of business ideas, business model validation and business feasibility analysis.

ENTR 350 The Entrepreneurial Mindset (3)
Application of entrepreneurial perspectives in diverse business environments and roles. New perspectives and latest developments in entrepreneurship, ethnic and immigrant ventures, entrepreneurial leadership, innovation, and self-awareness. Entrepreneurship as a source of socioeconomic and institutional change in a global setting. Prerequisite: MANG 300 or permission of instructor.

ENTR 396 Topics: (1-3)

ENTR 401 Entrepreneurial Finance (3)
The theory and practices of financing for the entrepreneur. Topics include cash forecasting and financial planning, cash collection and disbursements, short-term investing and financing, inventory management, accounts receivable management, credit and collections policy, and payables and accruals management. Prerequisite: FINA 301.

ENTR 450 Entrepreneurship (3)
Analysis of managerial problems of small business, preparing a business plan, case studies, and individual reports of local small business enterprises. Understanding of elementary accounting, finance, and business law required. Prerequisites: ACCT 201, MANG 201, MARK 231, FINA 301, and students choose either MARK 350, MANG 341, or CISB 341, or consent of instructor.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

ENTR 496 Topics: (1-3)

ENTR 550 Entrepreneurship (3)
Takes the student through activities that an entrepreneur would encounter in the small business start-up process. Topics will center around marketing, managerial, legal, financial and informational needs of the new venture. The use of cases, real life projects and Internet resources will be used extensively during the course.

ENVIRONMENTAL SCIENCE AND TECHNOLOGY (ENVS)

✓ **ENVS 101 Introduction to Environmental Science-GTSC2 (3)**
Impact of resource use and pollution on the earth's environment and biota. Scientific approach to solving environmental problems and the impacts of values upon global environmental decisions examined. General environmental awareness and literacy emphasized. Students may take either ENVS 101 or ENVS 103/103L for essential learning natural science credit, but not both.

✓ **ENVS 103 Field-Based Introduction to Environmental Science-GTSC1 (3)**
✓ **ENVS 103L Field-Based Introduction to Environmental Science Laboratory-GTSC1 (1)**
Examination of the effects of resource use and pollution on the earth's environment and biota. Integration of lecture with field and lab exercises to demonstrate scientific approach to solving environmental problems. Emphasis on environmental awareness and critical thinking. Students may take either ENVS 101 or ENVS 103/103L for essential learning natural science credit, but not both.

ENVS 104 Environmental Science: Global Sustainability (3)
Examination of local to global environmental issues. Includes human population dynamics and impact of agriculture on the environment, ecosystem function, energy use and sustainable development, air, water and soil pollution, climate change and environmental policy. Critical evaluation of readings from historical and modern environmental topics supplement lectures. Prerequisite: Declared ENVS major or minor or consent of instructor. Will not count as credit to the major if credit has already been received for ENVS 101 or ENVS 103.

ENVS 105 Readings in Environmental Science (1)
Critical readings in environmental science. Majors in Environmental Science and Technology only. ENVS 101 and 105 together are a substitute for ENVS 104. Prerequisite: ENVS 101.

ENVS 150 Introduction to Environmental Field Studies (1-3)
Techniques for common field measurements in environmental science. Basic interpretation and statistical analysis of data. Human effects on natural systems.

ENVS 196 Topics (1-3)

ENVS 204 Introduction to Ecosystem Management (3)
ENVS 204L Introduction to Ecosystem Management Laboratory (1)
Scientific management of natural resources in a changing environment. Problem solving emphasized in a case study approach to ecosystem management. Theories of ecology, economics, fisheries and wildlife management, biology, and sociology to solve problems using realistic and complex landscape scenarios. Prerequisite: ENVS 104 or consent of instructor.

ENVS 212 Environmental Health and Safety (2)
ENVS 212L Environmental Health and Safety Laboratory (1)
Examination of environmental health and safety issues associated with hazardous materials. Includes basic toxicology, threat assessment, and control strategies. Meets 40-hour OSHA training requirement for hazardous waste operations. Prerequisite: ENVS 221 or consent of instructor.

ENVS 221 Science and Technology of Pollution Control (3)
ENVS 221L Science and Technology of Pollution Control Laboratory (1)
Introduction to scientific, engineering, and technical elements of pollution control. Includes pollutant characteristics, investigation and cleanup of contaminated sites, waste treatment (air emissions, wastewater discharges, hazardous waste), waste minimization, life cycle analysis, and industrial ecology. Lab focuses on site investigation skills, design and operation of selected treatment technologies, and waste minimization audits. Prerequisites: ENVS 101 or ENVS 104; mastery of high school algebra; CHEM 121 or 131 recommended.

ENVS 278 Permaculture Design (2)
ENVS 278L Permaculture Design Laboratory (2)
Practical application of ecology to design of sustainable human and agricultural systems. Topics include permaculture principles, design strategies, sustainable agriculture, natural building, cooperative economics, and neighborhood design. Students work in teams to complete a design project for a local site.

ENVS 296 Topics (1-3)

ENVS 301 Environmental Project Management (2)
Basic practices of effective project management, including proposal preparation, planning, scheduling, cost estimating, cost and progress tracking, and team building. Prerequisites: any one of the following: ENVS 204, ENVS 221, ENVS 331, ENVS 340.

ENVS 312 Soil Science and Sustainability (3)
ENVS 312L Soil Science and Sustainability Laboratory (1)
Physical, chemical and biological properties of soils. Function of soils emphasized. Application of soil science to sustainable use of soils in natural

and agricultural settings. Prerequisites: CHEM 121 or higher and ENVS 204/204L, or consent of instructor.

ENVS 315 Mined Land Rehabilitation (2)
Principles and practices of mined land reclamation. Topics include mining techniques, disturbances caused by mining, regulations, closure of mine features, soil preparation, revegetation, and monitoring. Prerequisites: ENVS 455 or ENVS 312/312L (may be taken concurrently).

ENVS 321 Environmental Risk Analysis (3)
Assessment, management, and control of risk from toxic substances in the environment. Topics include basic elements of toxicity testing and epidemiology, chemical fate in the environment, exposure assessment, uncertainty in risk estimates, approaches to risk management, and risk communication. Prerequisites: ENVS 221, ENVS 221L, and MATH 113.

ENVS 331 Water Quality (3)
ENVS 331L Water Quality Laboratory (1)
Physical, chemical, and biological properties of aquatic systems. Includes movement of water in the watershed, stream classification and stability, lake circulation, aquatic ecology, chemistry and biology of natural and polluted waters, water quality monitoring, regulation and protection of surface water, and watershed assessment and management. Lab focuses on practical skills and field measurements culminating in an assessment of a local watershed. Prerequisites: CHEM 121 or 132, and STAT 200.

ENVS 337 Stream Biomonitoring (2)
Examination of the structure and organization of macroinvertebrate assemblages in streams and rivers. Topics include sample collection, sample preservation, sample identification, and analysis using the State of Colorado multimetric index for assessing water quality. Prerequisite: ENVS 331/331L.

ENVS 340 Applied Atmospheric Science (3)
Examination of the atmosphere and air pollution. Includes physical and chemical properties of the atmosphere, meteorology, air pollutant sources and effects, monitoring, pollutant dispersion, emission inventory, management of emissions, and regulation of air quality. Prerequisite: CHEM 121 or CHEM 131.

ENVS 350 Ecology and Management of Shrublands and Grasslands (3)
ENVS 350L Ecology and Management of Shrublands and Grasslands Laboratory (1)
Examination of ecological principles in determining the structure, function, and management of North American grasslands and shrublands. Three one-hour lectures and one three-hour lab per week. Two Saturday labs may be required. Prerequisite: STAT 200 and ENVS 204/204L.

ENVS 354 Forest Ecology and Management (3)
Examination of the structure and function of trees and forests. Topics include forest stand development, carbon cyling, nutrient cycling, forest disturbances, and basic practices of sustainable forest management. Prerequisites: ENVS 204 and ENVS 204L.

ENVS 360 Fire Ecology (3)
Examination of the ecological effects of fire on forests, shrublands, and grasslands. Includes fire effects on plants, animals, soil, and water, as well as using fire as a restoration tool. Prerequisites: STAT 200 and ENVS 204/204L. Corequisite: ENVS 360L.

ENVS 360L Fire Ecology Laboratory (1)
Field experience examining the ecological effects of fire on forests, shrublands, and grasslands of the Colorado Plateau. Includes field and lab studies that test the effects of fire on plants, animals, soil, and water. One 3-hour lab per week. May require 2 Saturday labs. Prerequisites: STAT 200 and ENVS 204/204L. Corequisite: ENVS 360.

ENVS 370 Renewable Energy (3)
An introduction to renewable energy resources from a technical perspective with an emphasis on sustainability. Topics include an introduction to the concepts of energy and power, units of measure, sources and forms of energy, uses of energy, energy efficiency, electricity, solar thermal and photovoltaics, bioenergy, hydropower, tidal power, wave power, wind power, geothermal, hydrogen, efficient building design and integration of renewables with current energy supplies.

ENVS 374 Sustainable Building (3)
Principles and practices of "green" building. Topics include philosophy of sustainable design, site development, passive heating and cooling, innovative structural systems and materials, energy supply and conservation, water and waste water management, indoor air quality, and case studies.

ENVS 394 Natural Resources of the West (1)
Seminars covering topics related to natural resources including water, soil, land, mineral and energy resources in the western United States. Guest speakers are invited from the academic community, industry or government agencies to give formal oral presentations following by informal discussion with students and faculty. The course may be repeated for a maximum of four semester hours of credit.

ENVS 395 Independent Study (1-3)

ENVS 396 Topics (1-3)

ENVS 410 Environmental Regulatory Compliance (3)
Examination of regulatory requirements pertaining to air pollution, water pollution, hazardous materials, and radioactive materials. Additional topics include enforcement, compliance management systems, compliance

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auditing, and innovative approaches to regulation. Prerequisites: ENVS 221, and junior or senior standing.

ENVS 413 Environmental Fate and Transport of Contaminants (3)
Physical, chemical, and biological factors influencing the persistence and migration of chemicals in the environment. Includes consideration of air, surface water, soil, and ground water. Emphasis on quantitative problem solving. Prerequisites: CHEM 121 or 132; and MATH 119, 146, or 151.

ENVS 420 Pollution Investigation & Monitoring (3)
Survey of field sampling and analytical methods for study of environmental systems. Topics include sampling design, regulatory issues, quality assurance, quality control, data interpretation, and reporting. Three one-hour lectures and one three-hour laboratory per week. Prerequisites: CHEM 121 or 131, and STAT 200; ENVS 221/221L recommended.

ENVS 420L Pollution Investigation & Monitoring Laboratory (1)
Examination of strategies and techniques for investigating contaminated sites and monitoring environmental pollutants. Topics include Phase I assessments, development and implementation of sampling and monitoring plans, quality assurance, methods of analysis, and data interpretation and presentation. Prerequisites: CHEM 121 or CHEM 131, and STAT 200; ENVS 221/221L recommended.

ENVS 431 Water and Wastewater Treatment (3)
Examination of water and wastewater treatment processes including physical, chemical, and biological treatment technologies. Emphasis on unit process design and modeling. Prerequisite: ENVS 331.

ENVS 433 Restoration of Aquatic Systems (3)
Principles and practices of restoring the functions and values of streams, ponds, and wetlands. Addresses physical, chemical, and biological aspects of these aquatic systems. Prerequisites: ENVS 331 and ENVS 331L.

ENVS 455 Restoration Ecology (3)
ENVS 455L Restoration Ecology Laboratory (1)
Examination of principles and techniques for restoration of community characteristics and ecosystem functions to disturbed lands. Lecture and lab emphasize practical application of ecological principles to restoration culminating in an independent project of designing a restoration project for a local area. Prerequisites: ENVS 204 and ENVS 312, or consent of instructor.

ENVS 460 Fire Management (3)
Examination of principles and current topics in fire management, including fire behavior, prescribed fire/smoke management, fuels/fuels management, wildfire control, fire in the wildland-urban interface, and fire policy. Prerequisites: ENVS 360/360L, STAT 200, one semester of biology. Corequisite: ENVS 460L.

ENVS 460L Fire Management Laboratory (1)
Field, lab, and computer modeling experience in predicting fire behavior, planning prescribed burns, managing hazardous fuels, and assessing wildfire risk in the wildland-urban interface. Prerequisites: ENVS 360/360L, STAT 200, one semester of biology. Corequisite: ENVS 460.

ENVS 475 Experimental Design and Statistical Analysis in Environmental Science (3)
Examination of principles and techniques for designing experiments and analyzing data in environmental sciences. Emphasis on practical application of analysis techniques using environmental data with computer applications. Prerequisites: ENVS 204 or ENVS 221, STAT 200, and 6 upper division credits; or consent of instructor.

ENVS 492 Capstone in Environmental Science and Technology (2)
Small-group environmental projects for outside organizations. Prepare project proposals, plan and implement projects, write project reports, and give oral presentations to clients. Exit exams for the Environmental Science and Technology major are administered as part of this course. Prerequisite: Senior standing or consent of instructor.

ENVS 495 Independent Study (1-3)

ENVS 496 Topics (1-3)

ENVS 497 Structured Research (1-3)
Research in environmental science under the direct guidance of a faculty member. Designed for junior and senior level students. Prerequisite: permission of instructor.

ENVS 499 Internship (1-4)
Work experience for a non-academic organization on environmental projects. Requires 45 contact hours per credit hour, a final report, and oral presentation. Available as an elective for Environmental Science & Technology majors. Prerequisites: Junior or senior standing in the Environmental Science & Technology program or consent of instructor.

ENVS 596 Topics (1-3)

ESSENTIAL LEARNING (ESSL)

ESSL 200 Essential Speech (1)
Development of confidence and competence in speaking through cross-curricular topics generated from individual Maverick Milestone coursework. Prerequisites: ENGL 112, MATH 110 or higher, at least 45 credit hours completed. Corequisite: ESSL 290.

ESSL 290 Maverick Milestone (3)
Interdisciplinary, thematically-oriented transition from the Essential Learning program to specialized programs. Develop the ability to solve problems and approach ideas using more than one set of intellectual tools. Taken

before the student completes 75 credit hours. Prerequisites: ENGL 112, MATH 110 or higher, at least 45 credit hours completed. Corequisite: ESSL 200.

FINANCE (FINA)

FINA 301 Managerial Finance (3)
Acquisition, allocation, and management of funds within the business enterprise. Financial goals, funds flow, valuation, capital budgeting, and financing strategies. Prerequisite: ACCT 201, and CISB 241 or STAT 241.

FINA 310 Risk Management (3)
Identification of risk, risk analysis, risk evaluation and methods of resolving risk issues in a business environment. Insurance as a risk management tool discussed. Prerequisite: Consent of instructor.

FINA 320 Fundamentals of Investments (3)
Introduction to the theory and practices of investment valuation and management. Topics include risk and return, investor objectives and strategies, the types and characteristics of investment instruments, the process of buying and selling securities, investment valuation and yields, and portfolio management. Prerequisite: FINA 301.

FINA 395 Independent Study (1-3)

FINA 396 Topics (1-3)

FINA 412 Life and Health Insurance Licensure and Financial Planning (3)
Analysis of personal and business life and health insurance policies. Focus includes coverage need determination, underwriting, marketing, financial, ratemaking, reserving and other insurance considerations. Prerequisite: Consent of instructor.

FINA 415 Property and Liability Insurance Licensure (3)
Analysis of personal and business property and liability insurance policies. Focus includes coverage need determination, underwriting, marketing, financial, ratemaking, reserving and other insurance considerations. Prerequisite: Consent of instructor.

FINA 420 Security Analysis and Portfolio Management (3)
Extension of the theory and practices of investment valuation and management. Topics include risk and return, market efficiency, economic and industry analysis, fundamental and technical analysis, bond analysis and management strategies, portfolio management and performance evaluation, and the characteristics and uses of options, rights, warrants, convertibles, and futures. Prerequisites: FINA 301 and FINA 320.

FINA 431 International Financial Management (3)
The theory and practices of financial management in an international product and capital marketplace. Topics include the international flow of funds, exchange rate determinants and risk hedging, international arbitrage and interest rate parity, purchasing power parity and the international Fisher effect, instruments of international trade financing, multinational capital budgeting, multinational costs of capital, and multinational capital structure. Prerequisite: FINA 301.

FINA 451 Financial Management: Theory and Applications (3)
Extension of the theory and practices of financial management using a case analysis approach. Topics include financial statement analysis, financial planning and forecasting, risk and return, capital budgeting, lease financing, cost of capital, capital structure, dividend policy, and risk management. Prerequisites: FINA 301; senior standing or consent of instructor.

FINA 495 Independent Study (1-3)

FINA 496 Topics (1-3)

FINA 500 Financial Strategy (3)
Introduction and development of analysis of the financial aspects of a corporation using both theory and application. Topics include capital markets, global economic factors that affect the corporation, capital asset pricing model, portfolio analysis and capital structure policy.

FINE ARTS (FINE)

✓ **FINE 101 The Living Arts-GTAH1 (3)**
An interdisciplinary survey of human creative efforts as they relate to each other. Art, drama, and music are compared with similarities stressed.

FINE 395 Independent Study (1-3)

FINE 396 Topics (1-3)

FINE 495 Independent Study (1-3)

FINE 496 Topics (1-3)

FINE 499 Internship (8-15)
Part or full-time work in various aspects of arts management. Sites may include galleries, musical, theatrical or other performing organizations, arts centers, or other situations that meet the instructor's approval. Half-time equals eight semester hours credit; full-time equals 15 semester hours credit. Prerequisite: junior standing in visual or performing arts. May also require selected courses in business, social science, etc. as appropriate to the internship sought.

FOREIGN LANGUAGES

FRENCH (FLAF)

FLAF 111 First-Year French I (3)
Introduction to the French language and culture.

FLAF 112 First-Year French II (3)
Introduction to the French language and culture.

FLAF 211 Second-Year French I (3)
Grammar review, vocabulary distinction, and readings in the French language. Prerequisites: two years of high school French, FLAF 111 and 112, or consent of instructor.

FLAF 212 Second-Year French II (3)
Grammar review, vocabulary distinction, and readings in the French language.

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Prerequisites: two years of high school French, FLAF 111 and 112, or consent of instructor.

FLAF 290 Special Studies In French (1-3)
Study beyond the scope of the existing curriculum.

FLAF 295 Independent Study (1-3)

GERMAN (FLAG)

FLAG 111 First-Year German I (3)
Introduction to the German language.

FLAG 112 First-Year German II (3)
Introduction to the German language.

FLAG 211 Second-Year German I (3)
Grammar review, vocabulary distinction, and readings in the German language. Prerequisites: two years of high school German, FLAG 111 and 112, or consent of instructor.

FLAG 212 Second-Year German II (3)
Grammar review, vocabulary distinction, and readings in the German language. Prerequisites: two years of high school German, FLAG 111 and 112, or consent of instructor.

FLAG 290 Special Studies In German (1-3)
Study beyond the scope of the existing curriculum.

GREEK (FLGK)

FLGK 111 Introductory Greek I (3)
An introduction to the fundamentals of reading ancient Greek. Emphasizes basic vocabulary and grammar. Explores aspects of Greek literature and culture. Provides a foundation for the study of ancient Greece. Develops a practical understanding of English.

FLGK 112 Introductory Greek II (3)
Introduction to the fundamentals of reading ancient Greek. Emphasizes basic vocabulary and grammar. Explores basic vocabulary and grammar. Explores aspects of Greek literature and culture. Provides a foundation for the study of ancient Greece. Develops a practical understanding of English.

FLGK 395 Independent Study (1-3)

JAPANESE (FLAJ)

FLAJ 111 Beginning Japanese I (3)
Basic competency in understanding, speaking, reading, and writing Japanese. Beginning familiarity with Japanese culture.

FLAJ 112 Beginning Japanese II (3)
Continued work on basic competency in understanding, speaking, reading, and writing Japanese. Increasing familiarity with Japanese culture.

LATIN (FLLT)

FLLT 111 Introductory Latin 1 (3)
Introduction to reading classical Latin. Emphasizes basic vocabulary and grammar. Explores aspects of Latin literature and Roman culture. Provides a foundation for the study of ancient Rome. Develops a practical understanding of English.

FLLT 112 Introductory Latin 2 (3)
Introduction to reading classical Latin. Emphasizes basic vocabulary and grammar. Explores aspects of Latin literature and Roman culture. Provides a foundation for the study of ancient Rome. Develops a practical understanding of English.

FLLT 395 Independent Study (1-3)

SPANISH (FLAS)

FLAS 111 First-Year Spanish I (3)
Basic Spanish language skills. Introduction to greetings, classroom and family vocabularies in the present and present progressive tenses. Hispanic cultural and social interactions.

FLAS 112 First-Year Spanish II (3)
Continuation of basic Spanish language skills. Introduction of specialized vocabularies and past tenses (preterit vs. imperfect). Continuation of Hispanic cultural and social interactions. Prerequisite: FLAS 111 or consent of instructor.

FLAS 114 Conversational Spanish I (3)
A beginning level class for adult students who wish to develop a basic vocabulary for speaking and understanding Spanish socially, on the job or south of the border.

FLAS 115 Conversational Spanish II (3)
A beginning level class for adult students who wish to develop a basic vocabulary for speaking and understanding Spanish socially, on the job or south of the border.

FLAS 118 Career Spanish (3)
For students with a background in FLAS 111 and 112 [First Year Spanish I & II] or their equivalent who wish to perfect command of the language in a variety of workplaces and professional areas of interest. Prerequisites FLAS 111, FLAS 112 [or their equivalent].

FLAS 211 Second-Year Spanish I (3)
End of basic Spanish language skills. Introduces subjunctive mood, future and conditionals and other language constructions. Prerequisite: FLAS 112 or consent of instructor.

FLAS 212 Second-Year Spanish II (3)
Review of Spanish grammar. Practice in writing, speaking, listening comprehension and reading. Prerequisites: FLAS 211, or consent of instructor.

FLAS 213 Spanish Conversation and Grammar (3)
Conversational practice in Spanish over a wide range of topics, with focus on conversational skills at the intermediate level. Review of Spanish grammar. Prerequisite: FLAS 211 (can be taken concurrently with FLAS 300).

FLAS 290 Special Studies in Spanish (1-3)

FLAS 295 Independent Study (1-3)

FLAS 300 Spanish Composition and Grammar (3)
Writing practice in Spanish over a wide range of topics (including written accents and other spelling conventions), with focus on writing skills at the intermediate level. Review of Spanish grammar. Prerequisite: FLAS 213 (can be taken concurrently).

FLAS 301 Advanced Spanish Grammar (3)
Level of instruction that assumes a previous formal contact with Spanish. It is not only devoted to increase awareness of grammatical accuracy but also develops the form and structure of language, always oriented towards a practical use of Spanish. Prerequisites: FLAS 212 or consent of instructor.

FLAS 302 Advanced Spanish Composition (3)
Writing of well-structured and clearly-planned compositions of varying lengths and styles. Provides the opportunity for students to do research and prepares them for the writing of regular term papers in Spanish. Prerequisites: FLAS 301 or instructor permission.

FLAS 303 Advanced Spanish Conversation (3)
Conversational practice in Spanish over a wide range of topics. Strategies in organization of oral discourse, and improvisation with special attention to advanced expression, grammaticality, and specific characteristics of spoken language. Prerequisites: FLAS 301 and FLAS 302.

FLAS 304 Advanced Oral Production and Composition (3)
Introduction to writing well-structured and clearly planned compositions of varying lengths and styles. Preparation, organization, and delivery of a speech in Spanish. Provides the opportunity for students to conduct research and prepares them for the writing of term papers and oral presentations in Spanish. Special attention given to advanced expression and grammar. Prerequisite: FLAS 300.

FLAS 305 Advanced Spanish Grammar and Spanish English Contrasts (3)
Development of grammatical awareness and accuracy, oriented towards a practical use of Spanish. Includes comparison and contrast of English and Spanish grammar. Prerequisite: FLAS 300.

FLAS 311 History and Culture of Spain (3)
History and culture of Spain. Early inhabitants through the twenty-first century. Written and oral reports in Spanish. Emphasizes development of cultural awareness and language skills. Prerequisite: FLAS 304.

FLAS 312 History and Culture of Latin America (3)
History and culture of Latin America from early inhabitants through the twenty-first century. Written and oral reports in Spanish. Emphasizes development of cultural awareness and language skills. Prerequisites: FLAS 304.

FLAS 321 Introduction to the Literature of Spain (3)
Introduction to the literature of Spain from the Middle Ages through the twenty-first century. Includes excerpts from major works in poetry, narrative, and theater. Prerequisites: FLAS 301, FLAS 302, and FLAS 303, or consent of instructor.

FLAS 322 Introduction to the Literature of Latin America (3)
Introduction to the literature of Latin America from Columbus through the twenty-first century. Includes indigenous traditions and excerpts from major works in poetry, narrative, and theater. Prerequisites: FLAS 301, FLAS 302, and FLAS 303, or consent of instructor.

FLAS 323 Introduction to Hispanic Literature I (3)
Exploration of Peninsular and Latin-American literature from their earliest manifestations through the 18th century. Introduction to literary analysis and criticism. Prerequisite: FLAS 305.

FLAS 324 Introduction to Hispanic Literature II (3)
Exploration of Peninsular and Latin-American literature from early 19th century works through contemporary literature. Introduction to literary analysis and criticism. Prerequisite: FLAS 305.

FLAS 341 Introduction to Hispanic Linguistics (3)
Introduction to human language with Spanish as the primary source for description and analysis. Explores Phonology, Word formation, Language Acquisition, Language and Society. Students will be equipped with the skills necessary to apply linguistic concepts to actual Spanish language data. Prerequisites: FLAS 301, FLAS 302, and FLAS 303, or consent of instructor.

FLAS 396 Topics (1-3)

FLAS 421 Hispanic Poetry (3)
Exploration of peninsular and/or Latin-American poetry, poets, and poetic forms. May include poetry written by Hispanic authors in the United States. Prerequisites: FLAS 301, FLAS 302, and FLAS 303 or consent of the instructor.

FLAS 422 Hispanic Prose (3)
Exploration of peninsular and/or Latin-American prose, including the novel, short story, and/or essay. May include prose written by Hispanic authors in the United States. Prerequisites: FLAS 301, FLAS 302, FLAS 303, and FLAS 341.

FLAS 423 Hispanic Drama and Film (3)
Exploration of dramatic texts and/or cinema from throughout the Spanish speaking world. May include plays and films by Hispanic authors in the United States. Prerequisites: FLAS 301, FLAS 302, FLAS 303, and FLAS 341, or consent of instructor.

FLAS 424 Advanced Hispanic Literature (3)
Exploration of important Hispanic literary movements through a more in-depth study of genres, including prose, poetry, film and drama. Topics vary. Prerequisite: FLAS 323 or FLAS 324.

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FLAS 431 Spanish for Medical and Social Services (3)
Provides for acquisition and refinement of superior linguistic and cross-cultural Spanish/English skills used in health care and social services. Prerequisites: FLAS 341.

FLAS 433 Spanish for the Professions (3)
Exploration of linguistic and cultural aspects of professional practices in a Hispanic context. Developing skills necessary for professional communication. Prerequisites: FLAS 341 or FLAS 323 or FLAS 324 or FLAS 311 or FLAS 312.

FLAS 434 Introduction to Translation (3)
Fundamentals of translation. Insights and practice in translation. Focus is on the Spanish-English language pair. Prerequisites: FLAS 323 or FLAS 324 or FLAS 311 or FLAS 312 or FLAS 341.

FLAS 435 Introduction to Interpreting (3)
Fundamentals of interpreting. Enhancement of linguistic and cross-cultural skills dealing with Spanish-English interpreting. Prerequisites: FLAS 311 or FLAS 312 or FLAS 323 or FLAS 234 or FLAS 341.

FLAS 441 Applied Phonetics and Phonology (3)
Theory and Practice of Spanish Phonetics and Phonology. Focused on dealing with pronunciation issues and recognition of variation in the Hispanic world. Includes recognition of speaker origen, and Spanish and English in contrast. Prerequisites: FLAS 341.

FLAS 442 Methodology of Teaching Foreign Languages (3)
Examination of current trends, methods, and techniques in foreign language pedagogy. Prerequisites: FLAS 301, FLAS 302, FLAS 303, FLAS 341, and FLAS 441, or consent of instructor.

FLAS 444 Using Technology, Literature and Culture in the Spanish Language Classroom (3)
Examination of current trends and techniques in the use of literature, technology and culture for teaching Spanish. Prerequisites: FLAS 311, FLAS 312, FLAS 321, FLAS 322, and FLAS 341, or consent of instructor.

FLAS 446 Spanish Language Variation (3)
Exploration of variation and change in the Spanish-speaking world. A special look at language contact phenomena, with particular focus on Spanish/English contact situations. Prerequisite: FLAS 341.

FLAS 495 Independent Study (1-3)

FLAS 498 Spanish Senior Practicum (3)
Faculty-coordinated internship consisting of work-oriented instruction in Spanish involving classroom or laboratory experiences and/or research. Prerequisites: Completion of six credit hours of FLAS at the 400-level.

OTHER LANGUAGES (FLAV)

FLAV 196 Topics: (1-3)

FLAV 290 Special Studies in Foreign Languages (1-6)
These courses are currently offered through Outreach: Ancient Greek, Latin, Advanced French, German, Spanish and other Classical and Modern Languages as permitted by interest and instructor availability.

FLAV 295 Independent Study (1-3)

FLAV 296 Topics (1-3)

FLAV 390 Special Studies in Foreign Languages (1-3)
These courses are currently offered through Outreach: Ancient Greek, Latin, Advanced French, German, Spanish and other Classical and Modern Languages as permitted by interest and instructor availability.

FLAV 395 Independent Study (1-3)

FLAV 396 Topics (1-3)

FLAV 495 Independent Study (1-3)

FLAV 496 Topics (1-3)

AMERICAN SIGN LANGUAGE (FLSL)

FLSL 111 American Sign Language I (3)
Basic receptive and expressive skill acquisition in American Sign Language (ASL) and other signing modes. Includes approximately 400 vocabulary items; the manual alphanumeric system; interrogatives; subject, object, possessive pronouns; simple present, past, and future verb tense formation.

FLSL 112 American Sign Language II (3)
Receptive and expressive skill practice in American Sign Language (ASL) and other signing modes. Includes approximately 800 vocabulary terms; classifiers; numeral incorporation; fingerspelling, loan signs, directional verbs; body and facial language. Prerequisite: FLSL 111.

FORENSIC ANTHROPOLOGY (FOAN)

✓ **FOAN 180 Survey of Physical Anthropology-GTSS3 (3)**
✓ **FOAN 180L Survey of Physical Anthropology Laboratory-GTSS3 (1)**
Exploration of biological evolution and variation in humans, mankind's place in nature, origin, and antiquity as represented in the fossil record; recent studies of non-human primates; the beginnings of culture; application of physical anthropology in forensic science. Corequisite: FOAN 180.

FOAN 232 Survey of Forensic Science (2)
Exploration of the relationship between science and society by noting the history and nature of the forensic scientist in aiding to resolve various legal issues and the role of the expert witness. Includes an overview of death investigation, scene investigation, and current forensic techniques. Prerequisites: ENGL 111 and MATH 110. Corequisite: FOAN 232L.

FOAN 232L Survey of Forensic Science Laboratory (1)
Exploration of basic forensic science techniques and laboratory practices. Topics include basic evidence handling, fingerprint development and comparison, blood spatter, anthropology, entomology, and ballistics. Prerequisites: ENGL 111 and MATH 110. Corequisite: FOAN 232.

FOAN 280 Crime Scene Processing (2)
Introduction to crime scene processing as rooted in the scientific method. Discussion of the documentation, recognition, collection, and preservation of evidence. Evidence development techniques used in the field will also be discussed, as well as the collection and preservation of evidence. The course includes an introduction to crime scene photography. Prerequisites: ENGL 111 or higher and MATH 110 or higher. Corequisite: FOAN 280L.

FOAN 280L Crime Scene Processing Laboratory (1)
Application of skills in the documentation, recognition, collection, and preservation of evidence. Evidence development techniques used in the field will also be discussed. An introduction to crime scene photography. Prerequisites: ENGL 111 or higher and MATH 110 or higher. Corequisite: FOAN 280.

FOAN 296 Topics: (1-3)

FOAN 350 Forensic Anthropology (3)
Introduction to forensic anthropology. Development of skills associated with analyzing skeletal remains, including estimating the sex, age, ancestry, and stature of the unknown individual from the skeleton. This course gives the student an overview of techniques to complete an osteological profile. Prerequisite: FOAN 232 or FOAN 180.

FOAN 396 Topics (1-3)

FOAN 475 Human Remains Detection and Recovery for Medico-Legal Investigations (3)
Archaeological techniques applied to detection and recovery of recent human remains. Includes practical experience of approximately 6 hours on an announced date. Prerequisites: BIOL 410, FOAN 450, or experience in law enforcement or a coroner's office and permission of the instructor.

FOAN 480 Professional Issues in Forensic Science (3)
Exploration of professional issues specific for forensic science practitioners. Topics include problems seen with forensic practitioners and in forensic science facilities, the organizations of scientific area committees (OSACs), admissibility of forensic evidence, courtroom testimony, and report writing. Ethical dilemmas are presented and discussion centers on their resolution. Standards of ethics codified by professional forensic organizations are presented. Prerequisites: FOAN 280/280L, and Junior or Senior standing.

FOAN 499 Internship (1-6)
Opportunities to apply theoretical principles in a structured research or organizational environment. Required clock hours dependent upon credit hours. Prerequisites: Junior or Senior status, BIOL 410, consent of instructor, Hepatitis B vaccinations, and a TB skin test before and after class. Course may be repeated for a maximum of six credit hours.

GEOGRAPHIC INFORMATION SYSTEMS TECHNOLOGY (GIST)

GIST 305 Cartography for GIS (1)
Introduction to maps as tools for communication and analysis of locationally-related information.

GIST 321 Introduction to Remote Sensing (2)
GIST 321L Introduction to Remote Sensing Laboratory (1)
Fundamentals of remotely sensed data, with emphasis on processing and interpretation of Landsat satellite imagery. Two one-hour lectures and one two-hour laboratory per week. Prerequisite: GIST 332/332L. Corequisite: GIST 321.

GIST 332 Introduction to Geographic Information Systems (2)
GIST 332L Introduction to Geographic Information Systems Laboratory (1)
Fundamentals of GIS and digital mapping, including basic GIS skills and an introduction to geospatial databases and analyses. Two one-hour lectures and one two-hour laboratory per week. Prerequisite: GIST 305 or GEOG 131.

GIST 375 Global Positioning Systems for GIS (2)
GIST 375L Global Positioning Systems for GIS Laboratory (1)
GPS techniques and applications as they relate to GIS data collection. Prerequisites: GIST 332/332L.

GIST 422 GIS Data Management and Editing (2)
GIST 422L GIS Data Management and Editing Laboratory (1)
Further exploration of GIS, involving creating, editing, and managing geospatial data and working with different types of GIS software. Two one-hour lectures and one two-hour laboratory per week. Prerequisites: GIST 332/332L.

GIST 432 Spatial Analysis and Modeling in GIS (2)
GIST 432L Spatial Analysis and Modeling in GIS Laboratory (1)
Exploration of GIS techniques and analysis with emphasis on raster-based GIS technology, processing, and geospatial analysis. Two one-hour lectures and one two-hour laboratory per week. Prerequisites: GIST 332/332L.

GEOGRAPHY (GEOG)

✓ GEOG 102 Human Geography-GTSS2 (3)
Introduction to spatial dimensions of the human world. Demography, human settlements and land use, political and economic systems, ethnicity, religion, and language examined from a spatial perspective.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

✓ **GEOG 103 World Regional Geography-GTSS2 (3)**
Survey of world geography by major world regions including an analysis of the physical elements, the inhabitants, and human occupancy patterns and an evaluation of the potential of each region for sustaining human populations.

GEOG 131 Introduction to Cartography (3)
Introduction to maps as tools for communication and analysis of locationally related information, including an introduction to concepts in Geographic Information Systems (GIS) and Global Positioning Systems (GPS).

GEOLOGY (GEOL)

✓ **GEOL 100 Survey of Earth Science-GTSC2 (3)**
Physical makeup of the earth, its history, and geology. One field trip is required. Intended for students with majors other than one of the sciences.

✓ **GEOL 103 Weather and Climate-GTSC2 (3)**
Non-mathematical introduction to elements of local and global weather: the atmosphere, cloud formation, precipitation, seasons, optical phenomena and violent storms. Students practice making 24-hour weather forecasts.

✓ **GEOL 104 Oceanography-GTSC2 (3)**
Non-mathematical introduction to the scientific study of the ocean. While the course focuses on the hydrosphere subsystem of the Earth System, the atmosphere, cryosphere, lithosphere and biosphere interrelationship with the hydrosphere are also examined.

✓ **GEOL 105 Geology of Colorado-GTSC2 (3)**
Introduction to minerals, rocks, geologic time scale and basic geologic terms, followed by geology of Colorado taught with the aid of movies and slides. A one-day field trip is required.

✓ **GEOL 106 Introduction to Dinosaurs-GTSC2 (3)**
Introduction to the study of dinosaurs, from geological, biological and historical perspectives. Intended for students interested in how different areas of science can be applied to a subject of strong human interest. Includes two full-day field trips to local dinosaur quarries and museums.

✓ **GEOL 107 Natural Hazards and Environmental Geology-GTSC2 (3)**
Introduction to geologic aspects of our environment. Includes studies of natural hazards, global climate change, geologic resources and emphasizes human interactions with the environment.

✓ **GEOL 108 Water, People, and Environment - GTSC2 (3)**
General introduction to the essential nature of water on Earth. Provides students with a comprehensive foundation in the water cycle, human use of water, water and the environment, the politics of water, and the critical issues surrounding water as a resource. Overview of global water issues as well as a focus on water in the American West, including the sources and uses of water, its importance as a resource, the critical issues of water conservation and scarcity, and the legal, political, economic and physical infrastructure that controls water in the American West.

✓ **GEOL 111 Principles of Physical Geology-GTSC1 (3)**
✓ **GEOL 111L Principles of Physical Geology Laboratory-GTSC1 (1)**
Materials that make up the earth and surface and interior processes that interact to produce the present features of the earth. Laboratory: minerals, rocks, topographic maps, earth quakes, and landforms. Three lectures and one two-hour laboratory per week.

✓ **GEOL 112 Principles of Historical Geology-GTSC1 (3)**
✓ **GEOL 112L Principles of Historical Geology Laboratory-GTSC1 (1)**
Origin of the earth and life, changes recorded in rocks and fossils using the geologic time scale and techniques of dating to place events in sequence. Laboratory: topographic and geologic maps, hand samples of rocks, reconstruction exercises, and fossils to interpret regional and general geologic history. One all-day field trip is required. Four lectures and one two-hour laboratory per week. Prerequisite: GEOL 111/111L or GEOL 113/113L or consent of instructor.

✓ **GEOL 113 Field-Based Introduction to Physical Geology-GTSC1**
✓ **GEOL 113L Field-Based Introduction to Physical Geology Laboratory-GTSC1**
Introduction to minerals, rocks, Earth structures, mountain building processes, and other elements of physical geology for science and non-science majors. A majority of class time will be spent in the field (including one Saturday) observing and mapping geological features of Western Colorado. There will be some indoor lectures and laboratory work. This course is recommended for prospective K-12 teachers.

GEOL 196 Topics (1-3)

GEOL 202 Introduction to Field Studies (3)
Mapping of several small areas using GPS, aerial photographs, and pace and compass methods. Profiles, cross-sections, and maps are prepared. Some unscheduled time is required to do mapping projects.

GEOL 204 Computer Applications in Geology (3)
Quantitative methods of geologic data analysis with the data manipulated on the computer. Methodical approach with limited theoretical emphasis; statistical concepts; special programs for graphical presentation and analysis. Three lectures per week and

computer laboratory time to complete exercises are required. Prerequisites: GEOL 111/111L or GEOL 113/113L, and GEOL 112/112L, and STAT 200 (recommended but not required) or consent of instructor.

GEOL 250 Environmental Geology (3)
Geologic aspects of environmental problems involving natural processes and anthropogenic activities. Studies include landslides, earthquakes, flooding, coastal erosion, and land subsidence as well as environmental impacts of mineral resource extraction, soil erosion, fossil fuel consumption, and climate change. Prerequisites: GEOL 100 or 104 or 105 or 111 or 113.

GEOL 296 Topics (1-3)

GEOL 301 Structural Geology (3)
GEOL 301L Structural Geology Laboratory (3)
Stress and strain in rock bodies. Description and occurrence of both brittle and ductile rock structures. Laboratory: stereographic and graphical solution of structural problems, the study of maps and cross sections, and some field problems. Three lectures and one two-hour laboratory per week. Four one-day field trips are taken. Prerequisites: GEOL 202, 204, and 111/111L or 113/113L, and MATH 130.

GEOL 325 Introduction to Engineering Geology (3)
Geologic principles applied to construction problems; case histories of major projects. Field trips and term project required. Prerequisite: GEOL 111/111L or GEOL 113/113L or consent of instructor.

GEOL 331 Crystallography and Mineralogy (3)
GEOL 331L Crystallography and Mineralogy Laboratory (1)
Morphology and classification of crystals; chemistry and genesis of minerals. Laboratory: identification of crystal systems and class, hand specimen identification of minerals, some X-ray diffraction work. Three lectures and one two-hour laboratory per week. Prerequisite: GEOL 202, 204, and CHEM 131 or consent of instructor.

GEOL 333 Geology of the Canyon Country (1)
Morphology and classification of crystals; chemistry and genesis of minerals. Laboratory: identification of crystal systems and class, hand specimen identification of minerals, some X-ray diffraction work. Three lectures and one two-hour laboratory per week. Prerequisite: GEOL 202, 204, and CHEM 131 or consent of instructor.

GEOL 340 Igneous and Metamorphic Petrology (3)
GEOL 340L Igneous and Metamorphic Petrology Laboratory (1)
Origin, composition and classification of igneous and metamorphic rocks. Laboratory: identification of igneous and metamorphic rocks in hand specimens. Three lectures and one two-hour laboratory per week. Prerequisite: GEOL 331.

GEOL 351 Applied Geochemistry (3)
Geochemistry and its relationship to weathering and soils, geochemical surveys and prospecting techniques, reactions of contaminants with earth materials, and methods of reducing environmental degradation. Prerequisites: CHEM 121/121L, CHEM 122/122L, and GEOL 111/111L or GEOL 113/113L.

GEOL 355 Basic Hydrology (3)
Introduction to physical hydrologic processes including precipitation, evapotranspiration, infiltration, runoff and subsurface flow. Examination of hydrologic modeling, problem solving, and monitoring techniques as well as water resource management issues at both local and global scales. Prerequisite: MATH 113, or MATH 151 or consent of instructor.

GEOL 359 Survey of Energy-Related Natural Resources (3)
Origin, location, and economics of non-metallic geologic commodities, including phosphates, evaporites, oil, gas, coal, and sedimentary uranium deposits. Students give oral and written reports on two localities. Prerequisites: GEOL 111/111L or GEOL 113/113L; CHEM 131/131L, or consent of instructor.

GEOL 361 Survey of Mineral-Related Natural Resources (3)
The genesis, description, and exploitation of metallic and non-metallic natural resources consumed by modern society, such as base-metals, precious metals and gems, aggregates and construction materials, fertilizers, and chemical-industrial commodities. Environmental, economic, and socio-political issues associated with utilization of these resources will also be addressed. At least one field trip to a local resource area will be arranged. Three lectures per week. Prerequisites: GEOL 111/111L or GEOL 113/113L, and CHEM 131, 131L, or consent of instructor.

GEOL 370 Renewable Energy (3)
An introduction to renewable energy resources from a technical perspective with an emphasis on sustainability. Topics include an introduction to the concepts of energy and power, units of measure, sources and forms of energy, uses of energy, energy efficiency, electricity, solar thermal and photovoltaics, bioenergy, hydropower, tidal power, wave power, wind power, geothermal, hydrogen, efficient building design and integration of renewables with current energy supplies.

GEOL 393 Co-operative Education (3-12)

GEOL 394 Natural Resources of the West (1)
Seminars covering topics related to natural resources including water, soil, land, mineral and energy resources in the western United States. Guest speakers are invited from the academic community, industry or government agencies to give formal oral presentations followed by informal discussion with students and faculty. The course may be repeated for a maximum of four semester hours of credit.

GEOL 395 Independent Study (1-3)

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

GEOL 396 Topics (1-3)

GEOL 402 Applications of Geomorphology (3)
GEOL 402L Applications of Geomorphology Laboratory (1)
Knowledge of landform genesis and shaping processes is applied to solve modern problems with emphasis on local soils, slopes, rivers, erosional surfaces, and structural framework. Laboratory and field studies used to explore frost, running water, slope movement, ground water, wind, and glaciers which have affected the local environment. Practical techniques of measurement and interpretation, including statistical and computer techniques, used to produce models of landscape development. A term project must be completed. Two major field trips are required. Four lectures and one two-hour laboratory per week. Prerequisite: GEOL 202 and GEOL 204 and consent of instructor.

GEOL 404 Geophysics (3)
GEOL 404L Geophysics Laboratory (1)
Exploration for mineral and petroleum and preliminary investigation of sites for engineering and environmental projects with emphasis on refraction and reflection seismic, gravity, magnetic, electrical, electromagnetic ground-penetrating radar and radioactive methods. Laboratory: interpretation of data, computer applications, and field trips. Four lectures and one two-hour laboratory per week. Prerequisites: GEOL 202 and GEOL 204, GEOL 111/111L or GEOL 113/113L, and GEOL 112/112L, and PHYS 112, (calculus is recommended but not required) or consent of instructor.

GEOL 405 Solid Earth Geophysics (3)
Classical physics applied to the study of the earth with emphasis on the origin of the earth, its gravitational, geomagnetic, and geothermal characteristics, seismicity, the dynamics of the earth's crust, plate tectonics, and continental drift. One field trip required. Prerequisites: GEOL 404 or consent of instructor.

GEOL 411 Paleontology (3)
GEOL 411L Paleontology Laboratory (1)
Taxonomy, morphology, ecology, and geologic range of most groups of invertebrate fossils. Laboratory: field identifications of guide fossils. A one-day field trip is required. Two lectures and one two-hour laboratory per week. Prerequisite: beginning Biology course or consent of instructor.

GEOL 415 Introduction to Ground Water (3)
GEOL 415L Introduction to Ground Water Laboratory (1)
Relationships of ground water to other water sources, hydrologic cycle, water balance, hydrologic characteristics of rocks, hydraulics and equations defining flow, ground water quality, and contamination, exploration and measurement techniques (including geophysical procedures), state and federal regulations, and computer modeling. Laboratory: Acquisition, analysis, and interpretation of ground water data. Prerequisites: GEOL 111/111L or GEOL 113/113L, and MATH 151, and at least high school level biology, chemistry and physics. Three lectures and one two-hour laboratory per week.

GEOL 443 Field-Based Depositional Systems (3)
GEOL 443L Field-Based Depositional Systems Laboratory (1)
Analysis of depositional systems with a strong field component. Lectures followed by weekly field trips will show students local examples of all common depositional systems. Prerequisites: GEOL 202.

GEOL 444 Sedimentology and Stratigraphy (3)
GEOL 444L Sedimentology and Stratigraphy Laboratory (1)
Physical, chemical, and biological characteristics of sedimentary rocks, with emphasis on depositional processes and environments, diagenesis, stratigraphic sequences, and correlation. Laboratory emphasis is on description and classification of sedimentary rocks, analysis of depositional environments, and stratigraphic problems. One weekend field trip is required. Prerequisites: GEOL 111/111L or GEOL113/113L, GEOL 112/112L, GEOL 202, GEOL 204, GEOL 331/331L, and CHEM 131/131L.

GEOL 455 River Dynamics (3)
GEOL 455L River Dynamics Laboratory (1)
Introduction to river forms and processes, including basic open-channel hydraulics, sediment transport, fluvial geomorphology and human interactions with river systems. Lab covers field, lab, and computer techniques to understand and model river forms and processes, including human interactions with river systems. Prerequisite: GEOL 355 or consent of instructor.

GEOL 480 Summer Field Camp (6)
This course involves basic training in field geology. Students will perform a variety of geologic mapping exercises using topographic maps and air photos. Students will gain an appreciation of geologic maps - how they are made, the uncertainties and unknowns in mapping, and how mappers deal with them. Most mapping exercises are in deformed sedimentary strata and Quaternary surficial deposits. Some field exercises will involve collection and interpretation of hydrological data. The course is a six full weeks in duration, beginning immediately after conclusion of Spring Semester. Students should not expect to have weekends or holidays off. Students will also be camping out at least half the time or more during this course. Prerequisites: GEOL 111/111L or GEOL 113/113L, GEOL 112/112L, GEOL 301/301L. GEOL 444/444L recommended.

GEOL 490 Seminar (3)
Design, implementation, and completion of independent research project including proposal and report writing, and oral presentations. Critiques of geologic literature, data compilation, and periodic oral presentations are also required. Prerequisites: upper division standing.

GEOL 493 Co-Operative Education (3-12)

GEOL 495 Independent Study (1-3)

GEOL 496 Topics (1-3)

GEOL 497 Structured Research (1-3)
Geological research under the direct guidance of a faculty member. Designed for junior and senior level students. Prerequisite: permission of instructor.

GEOL 499 Internship (1-4)

HEALTH SCIENCES (HSCI)

HSCI 101 Introduction to Health Care Professions (3)
Explores the nature of services provided, opportunities within selected fields, and relationships of fields within health sciences. Concepts include: medical terminology, safety and accident prevention, professionalism, legal aspects, safety, communication and math skills, and infection control.

HSCI 295 Independent Study (1-3)

HSCI 401 Health Informatics I - Data Analysis (2)
Reviews statistical analysis, HIPPA, confidentiality, and terminology pertinent to health informatics. Prerequisite: permission of instructor.

HSCI 406 Health Informatics II: Project Design & Implementation (2)
Explores application of knowledge and skills to selected health informatics project. Prerequisite: permission of instructor.

HSCI 501 Advanced Health Informatics I - Data Analysis (1)
Reviews statistical analysis, HIPPA, confidentiality, and terminology pertinent to health informatics at the graduate level. Prerequisite: permission of instructor.

HSCI 506 Advanced Health Informatics II: Project Design and Implementation (2)
Explores application of knowledge and skills to selected health informatics projects at the graduate level. Prerequisite: permission of instructor.

HISTORY (HIST)

✓ **HIST 101 Western Civilizations-GTHI1 (3)**
Political, social, economic, and cultural history of Western mankind from ancient times to modern times.

✓ **HIST 102 Western Civilizations-GTHI1 (3)**
Political, social, economic, and cultural history of Western mankind from ancient times to modern times.

✓ **HIST 131 United States History-GTHI1 (3)**
History of the United States from Colonial period to modern times.

✓ **HIST 132 United States History-GTHI1 (3)**
History of the United States from Colonial period to modern times.

HIST 202 Introduction to Historical Research (3)
An introduction to the methods and areas of historical research, with the intent of preparing students for research requirements of upper-division history courses. Prerequisites: 6 hours selected from HIST 101, 102, 131, and 132.

HIST 225 History of Colorado (3)
History of the state from pre-historic to modern times.

HIST 296 Topics (1-3)

HIST 300 History of England to 1660 (3)
Examines the political, social, and cultural developments of England from the ancient period to the end of the English Civil Wars, with particular attention to England's contributions to the Western heritage. Prerequisite: HIST 101.

HIST 301 History of Modern Britain (3)
Examines the political, social, and cultural history of Great Britain from the Restoration of the monarchy in 1660 to the modern era. Prerequisite: HIST 102.

HIST 302 History of Modern France (3)
France from the Revolution of 1789 to the present. Prerequisite: HIST 102 or consent of instructor.

HIST 303 History of Modern Germany (3)
Origins and development of the modern Germany nation-state from 1860 to the present. Prerequisite: HIST 102 or consent of instructor.

HIST 305 The Old South (3)
The uniqueness of the Antebellum South, the growth of Southern nationalism, and the politics of the Late National period. Prerequisite: HIST 131.

HIST 310 Latin American Civilization (3)
Historical development of Latin America from pre-Columbian times to the present. Prerequisite: HIST 102 or consent of the instructor.

HIST 315 American Indian History (3)
American Indian history from pre-Columbian America to the present with an emphasis on federal Indian policy. Case studies will also address the adaptation of Indian people to changing social and economic conditions. Prerequisites: HIST 131 and HIST 132.

HIST 316 American Slavery (3)
Exploration of the development of race slavery and an examination of slave life in colonial North America and the United States from Colonization through reconstruction. Prerequisite: HIST 131.

HIST 320 The American West (3)
The American West from pre-Columbian times through the Twentieth Century with special emphasis on the diverse cultures and ecological factors that have defined the region. Prerequisites: HIST 131, HIST 132, or consent of instructor.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

HIST 330 History of 19th Century Europe (3)
Political, social, intellectual, and diplomatic forces operating in Europe between the French Revolution and World War I. Prerequisites: HIST 101, 102.

HIST 331 The 20th Century (3)
Investigation of the development of our modern world since World War I with emphasis on Europe and its role in that process. Prerequisites: HIST 101, 102 or consent of the instructor.

HIST 332 History of Modern Warfare (3)
War, its causes, consequences, and impact on history from the 18th century to the present. Prerequisites: HIST 101, 102.

HIST 333 The International History of the Cold War (3)
Exploration of the international ramifications of the Cold War, from the end of World War II to the collapse of the Soviet Union. Prerequisites: HIST 102 and HIST 132.

HIST 334 History of the British Empire (3)
Explores the origins, development, and decline of the British Empire from 1550 to 2000, with particular attention on the effects of empire on native peoples and the consequences of empire for Great Britain. Prerequisite: HIST 102.

HIST 340 History Of the Middle East (3)
History of the Middle East and North Africa from the period of pre-Islamic Arabia through modern times, including the Umayyad, Abbasid, and Ottoman empires. Prerequisites: HIST 101 and HIST 102.

HIST 342 The Early American Republic (3)
The social, cultural, intellectual and political developments in America from 1783-1850. Prerequisites: HIST 131, 132, or consent of instructor.

HIST 344 The Age of Industry in America (3)
The social, intellectual, and political events in the United States from the end of the Civil War to the beginning of the Great Depression. Prerequisites: HIST 131, 132, or consent of instructor.

HIST 345 History of Immigration, Race, and Ethnicity in America (3)
Exploration of the historical study of immigration, race, and ethnicity in the United States. Various approaches and unique methodologies in the study of these topics from early American history to the present. Investigation of the ways in which economic and racial considerations shaped Americans' debates about "fitness" for citizenship, freedom, and independence. Prerequisite: HIST 131 or HIST 132.

HIST 346 The United States in the 1950's and 1960's (3)
The social, intellectual, and political Events in the U.S. form the end of WWII through the 1960s. Prerequisites: HIST 131, 132, or consent of instructor.

HIST 347 Global America: 1970-2000 (3)
The political and social implications of America as the dominant global power, from 1970 to the present. Prerequisite: HIST 132.

HIST 350 Renaissance and Reformation (3)
Examines the political and social context of the Renaissance and Reformation. Prerequisites: HIST 101.

HIST 355 Ancient and Medieval Cities (3)
The development (physical, social, political) of cities in the ancient and medieval periods and their role in early western civilization. Prerequisite: HIST 101.

HIST 360 Medieval Europe (3)
Examines the political, social, and religious institutions of Medieval Europe (300-1475). Prerequisites: HIST 101, HIST 102.

HIST 370 Early United States Women's History (3)
Historical survey of cultural, economic, and political contributions of American women from colonization to Reconstruction. Prerequisites: HIST 131, 132.

HIST 371 20th Century United States Women's History (3)
Historical survey of cultural, economic, and political contributions of American women from Reconstruction to the present. Prerequisites: HIST 131, 132.

HIST 375 American Sport History (3)
An examination of American society from the Colonial era to the present through the lens of sport. Prerequisite: HIST 131 or 132. Both courses are recommended.

HIST 394 Junior Seminar in Historiography (3)
Examines the role of historiography in the historical discipline, with the intent of preparing students to undertake an historical research project. Topic varies by semester, depending upon specialty of instructor. Prerequisites: HIST 101, HIST 102, HIST 132, and HIST 202.

HIST 395 Independent Study (1-3)

HIST 396 Topics (1-3)

HIST 400 The Soviet Union and Eastern Europe (3)
Imperial Russia, the Soviet Union, and Eastern Europe from 1900 to the present. Prerequisites: HIST 101, HIST 102 or consent of instructor.

HIST 403 East Asia and the Modern World (3)
China, Japan, Korea, and Vietnam since 1840. Prerequisite: consent of instructor. Prerequisites: HIST 101 and HIST 102.

HIST 404 Senior Seminar in Historical Research (3)
History-specific research with emphasis on utilization of primary documents and practice in conducting research and reporting results. Prerequisites: HIST 202 and twelve hours of upper division History or consent of instructor.

HIST 405 Introduction to Public History (3)
Exploration of non-academic historical skills employed in museum work, archival management, and positions with historical societies and historic preservation agencies. Career opportunities will be examined.

Certain courses are only offered during the fall or spring semesters, or may be available only in alternating years. It is the student's responsibility to meet with their advisor and/or check the two-year course planning calendar on the Colorado Mesa University website for course availability. Learn more at **coloradomesa.edu/academics**.

Prerequisites: HIST 131, HIST 132, or consent of instructor.

HIST 406 History of the African Continent (3)
The development of African cultures from the ancient to modern periods, with particular attention to interaction with non-African cultures. Prerequisites: HIST 101 and HIST 102, or consent of instructor.

HIST 409 Material Culture Studies (3)
Introduction to the field of material culture studies and engagement in hands-on work with a variety of historical artifacts. Prerequisites: HIST 131 and HIST 132, or consent of the instructor.

HIST 410 Environmental History of the United States (3)
The evolution of public attitudes and governmental policies and practices relative to the wilderness, natural resource development, and the natural environment from colonial times to the present. Prerequisites: HIST 131, HIST 132, or consent of instructor.

HIST 415 Colonial America (3)
Examines the development of colonial society in North America and the tensions that arose between Native American, European, and African people and cultures. Prerequisite: HIST 131.

HIST 416 The American Revolution (3)
An overview of and perspectives on the causes and outcomes of the American Revolution. Prerequisite: HIST 131.

HIST 420 Civil War (3)
The causes and outcomes of the American Civil War. Prerequisites: HIST 131, or consent of instructor.

HIST 425 History of Sexuality (3)
Historical discussions on sexuality from the New World to present. Analysis of gender, race, ethnicity, class, and region in historical context. Prerequisite: HIST 132.

HIST 430 The Ancient Mediterranean World (3)
The Mediterranean world from pre-classical times to the fall of the Roman Empire. Prerequisites: HIST 101, HIST 102, or consent of instructor.

HIST 435 Classical Archaeology (3)
Examines the archaeological evidence for some of the ancient Mediterranean civilizations and how the historian uses archaeology to better understand the ancient world. Prerequisite: HIST 101.

HIST 440 Early and Medieval Christianity (3)
Examines the historical development of Christianity through the middle ages, focusing on the social (marriage and family) and political (kingship) consequences of Christianity. Prerequisites: HIST 101.

HIST 445 The Holocaust (3)
Exploration of the origins, implementation, and cultural representations of Nazi Germany's "Final Solution." Prerequisite: HIST 102.

HIST 450 European History and Film (3)
Examines the medium of film and how it shapes perceptions of European history. Focuses on the treatment of film as historical text. Postulates whether filmmakers are historians. Prerequisites: HIST 101 and HIST 102.

HIST 495 Independent Study (1-3)

HIST 496 Topics (1-3)

HIST 499 History Internship (1-3)
Experience with historical work in settings outside the university community, including museums, archives, and local, state, and federal agencies. Instructor permission required and internship must be arranged during the semester prior to the field experience. Prerequisites: Nine upper division hours in history and junior status.

HIST 501 Early American History: Foundation - Civil War (3)
Graduate level seminar covering the first half of American history. This course will provide graduate level instruction to prepare students to teach a collegiate level introductory course in early American history. Prerequisite: Admission into Social Sciences Graduate Certificate Program.

HIST 502 Late American History: Civil War - Modern U.S. (3)
Graduate level seminar covering the second half of American history. This course will provide graduate level instruction to prepare students to teach a collegiate level introductory course in modern American history. Prerequisite: Admission into Social Sciences Graduate Certificate Program.

HIST 510 Early European History: Ancient - Reformation (3)
Graduate level seminar covering the first half of European history. This course will provide graduate level instruction to prepare students to teach a collegiate level introductory course in early European history. Prerequisite: Admission into Social Sciences Graduate Certificate Program.

HIST 511 Modern European History: Reformation - 20th Century (3)
Graduate level seminar covering the second half of European history. This course will provide graduate level instruction to prepare students to teach a collegiate level introductory course in modern European history. Prerequisite: Admission into Social Sciences Graduate Certificate Program.

HONORS (HNRS)

HNRS 196 Topics: (1-3)

HNRS 396 Topics (1-3)

HNRS 496 Topics: (1-3)

HNRS 498 Honors Thesis (3)

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

HOSPITALITY MANAGEMENT (HMGT)

HMGT 101 Travel Industry I (3)
Introduction to tourism and its relationship to the business world, an overview of all sectors of business and the components of the travel, tourism, and hospitality industry. Travel methods, destination resorts, and other businesses which serve the traveler are evaluated. A requirement for all Hospitality Management students.

HMGT 102 Travel Industry II (3)
Evaluation of job opportunities in the travel, recreation, and hospitality fields. Travel trends, feasibility studies, and marketing techniques are analyzed. Students are provided an opportunity to make preparations and acquire skill instructions for work in the student's career objective. Field trips and visiting lecturers are included. Prerequisite: HMGT 101 or consent of instructor.

HMGT 103 Travel and Tourism Marketing Techniques (3)
Interpretation of marketing problems, strategies, and techniques of industries engaged in serving the traveler, methods of identifying potential markets, preferences, and likely responses to promotional programs of private and governmental travel entities. Required of all Hospitality Management students. MARK 231 recommended for baccalaureate students. Prerequisite: HMGT 101 or consent of instructor.

HMGT 199 Employment Concepts (1)
Introduction of the concepts of employment in conjunction with the internship experience. It will provide students with an opportunity to share their concerns with the instructor and other students, allow employers to discuss the internship with students and assist the student in developing his or her career goals. The student will enroll in this course the spring semester immediately preceding the summer they intend to do their HMGT 299 Internship. Prerequisite: HMGT 101.

HMGT 200 Management and Supervisory Skills for the Hospitality Industry (3)
Evaluates the supervisory and management processes through a comprehensive overview of how these processes relate to specific hospitality industry applications. Prerequisite: HMGT 101 or consent of instructor.

HMGT 201 Management in the Travel Industry I (3)
An opportunity to explore operating techniques and problems of the major industries involved in tourism, travel, and hospitality through the eyes of the operating manager. Specific skills used within various industries are developed. Prerequisite: HMGT 200 or consent of instructor.

HMGT 211 Travel Destinations (3)
For the individual who plans to work, study, or travel internationally including the professional who is, or plans to be, part of the travel industry. Life styles and current local aspects in foreign destinations are considered and guest lecturers are included. Open to all students but strongly recommended for Hospitality Management students.

HMGT 215 Computerized Reservations (3)
An introductory course providing an overview of operation of a computerized reservations system. Prerequisites: HMGT 101 and HMGT 200.

HMGT 217 Hotel Operations (3)
Introductory course providing an overview of the operation of a hotel front office. This will include the use of the personal computer and state-of-the-art software for reservations, check-in, check-out and creating the daily report. Prerequisite: HMGT 101.

HMGT 218 Housekeeping Operations (3)
Comprehensive overview of managing housekeeping operations in the lodging industry including practical applications to industry segments and impact on capital expenditures. Prerequisite: HMGT 101 or consent of instructor.

HMGT 241 Food and Beverage Operations (3)
Comprehensive overview of management processes in food and beverage operations including site visits and industry guest lecturers. Prerequisite: HMGT 101 or consent of instructor.

HMGT 295 Independent Study (1-3)

HMGT 296 Topics (1-3)

HMGT 299 Internship (1-12)
Classroom studies combined with salaried work in an experience which relates to the student's career goal. Only for, and required of, Hospitality Management students. Credit not available through competency or challenge. Prerequisite: HMGT 200, GPA of 2.00 or higher, or consent of instructor.

HMGT 310 Travel and Tourism Marketing Techniques (3)
Interpretation of marketing problems, strategies, and techniques of industries engaged in serving the traveler Study will include advanced methods of identifying potential markets, preferences and likely responses to promotional programs of private and public travel entities. Required of all Hospitality Management majors. Prerequisites: HMGT 101, MARK 231 or consent of instructor.

HMGT 350 Private and Commercial Recreation Systems (3)
Profit-based recreation industry, including managing the recreation enterprise, economic feasibility studies, small business entrepreneurship, market characteristics, professional opportunities, and trade association research and publications. Prerequisites: HMGT 101 and MANG 201.

HMGT 351 Community Tourism Systems (3)
Community as a tourist destination area with concentration on identification of linkages between tourism industries and local economies, and the process of developing and managing park and recreation resources to serve the tourist. Prerequisites: HMGT 101, HMGT 200, MANG 201.

HMGT 352 Public Recreation Systems (3)
National and state outdoor recreation resource management systems including a variety of administrative tools applicable to operation and maintenance as well as comprehensive discussion of legislation, land use policy, forest recreation planning, and governmental designation programs. Prerequisites: HMGT 101, HMGT 200, MANG 201.

HMGT 396 Topics: (1-3)

HMGT 400 Hospitality Security and Safety (3)
Individualized security programs. Security and safety equipment and procedures. Guest protection, asset protection, risk management, loss prevention, and OSHA regulations for lodging properties. Prerequisite: BUGB 349.

HMGT 410 Hospitality Facilities Management (3)
Hotel or restaurant physical plant management. Interface with engineering and maintenance departments. Prerequisites: HMGT 101 and HMGT 200, or consent of instructor.

HMGT 450 Strategic Hospitality Sales and Marketing (3)
Strategic and operating sales and marketing plans for hospitality properties. Includes development of a sales and marketing plan as a semester project. Prerequisite: MARK 231 or consent of instructor.

HMGT 470 Hospitality Management Strategies (3)
Comprehensive overview of major hospitality industry managment segments. Includes management strategies adapting to the rapidly changing hospitality industry environment. Prerequisites: HMGT 101, HMGT 200, HMGT 410, HMGT 450, or instructor permission.

HMGT 495 Independent Study (1-3)

HMGT 496 Topics: (1-3)

HMGT 499 Internship (1-12)

HUMANITIES (HUMA)

HUMA 196 Topics (1-3)

HUMA 201 Field Studies in Humanities (1-3_
Study/travel tours of varying lengths in the United States and foreign countries to acquaint students in some depth with particular aspects of world culture (language, the arts, literature, etc.) both contemporary and historical.

HUMA 296 Topics (1-3)

HUMA 300 History and Development of Books (3)
History and development of the book from the development of the alphabet to the present in the context of changing technologies and various social, cultural, and economic influences. Prerequisites: Junior or senior status, or consent of instructor.

HUMA 301 Field Studies in Humanities (1-3)
Prerequisite: junior or above standing.

HUMA 395 Independent Study (1-3)

HUMA 396 Topics (1-3)

HUMA 495 Independent Study (1-3)

HUMA 496 Topics (1-3)

HUMA 499 Internship (8)
See faculty advisor for details.

HUMAN RESOURCE MANAGEMENT (HRMA)

HRMA 371 Human Resource Management (3)
Principles and applications of basic human resource management (HRM). Survey of the HRM functions in organizations. Topics include staffing, training and development, compensation, safety and health, employee and labor relations, and employee performance management. Prerequisites: MANG 201, junior or senior standing, or consent of instructor.

HRMA 372 Employment Assessment (3)
Knowledge and skills necessary to effectively analyze and forecast organizational staffing requirements, assess, recruit and select candidates, and effectively retain employees in today's complex organizations. Legal aspects of staffing process emphasized. Prerequisite: HRMA 371.

HRMA 373 Human Resource Management, Leadership, Ethics, and Social Responsibility (3)
Review of literature related to Human Resource Management (HRM) and leadership, ethics, and corporate social responsibility. Review articles and books related to the responsibility of HRM leaders and their significant influence on organizational practices, leadership, ethical behavior and corporate social responsibility. Prerequisite: HRMA 371 or consent of instructor.

HRMA 475 Compensation and Reward Systems (3)
Designing strategic compensation systems. Seniority, merit, incentive pay, person-focused pay. Job evaluation, internal and external equity. Benefits administration. International, executive, and flexible workforce compensation systems. Diversity and ethical considerations. Prerequisites: HRMA 371, and HRMA 372 (may be taken concurrently with instructor's permission).

HRMA 478 Advanced Human Resource Management (3)
Capstone course for HRM concentration. Expanded examinations of human resource topics such as performance appraisal, sexual harassment, religion and spirituality in the workplace, compensation, and labor relations. Reviews current topics in HRM providing a practical application of topics covered in other HRM courses as well as current issues. Prerequisites: HRMA 371, HRMA 372, HRMA 373, HRMA 475 and senior status.

HRMA 495 Independent Study (1-3)

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

HRMA 520 Human Resource Management (3)
Provides an in-depth study of the effective use and adaptation to the human resources of an organization through the management of people-related activities. The focus is on the core responsibilities and activities of the HR manager. Also included is a detailed review of current statutes and regulations affecting the HR field.

INTERNATIONAL STUDIES (INTS)

INTS 101 Introduction to International Studies (3)
Introduction to concepts, paradigms and theories used to describe and explain International Studies. Attention given to the interdisciplinary nature of academic disciplines, peoples in cultural context, environments, education systems, world resources, social and economic institutions.

INTS 396 Topics (1-3)

KINESIOLOGY – ACTIVITY (KINA)

The following courses meet the physical activity requirement for graduation. All students seeking a baccalaureate degree must take KINE 100 plus either one or two courses from the activity list, as specified on the program sheet for each major. Each course is scheduled for an eight week module and designed to emphasize and assess basic skills, related knowledge and the importance of physical activity in promoting and maintaining personal health. Students will learn and apply health and fitness concepts while gaining skills relating to the specific activity. Throughout the 8 weeks, students will complete various assignments designed to encourage physical activity, healthy lifestyle changes and application health and fitness concepts. Prerequisites for all "intermediate" or part II classes: the corresponding beginning course or instructor consent.

KINA 101 Beginning Swimming (1)
KINA 102 Intermediate Swimming (1)
KINA 103 Springboard Diving (1)
KINA 104 Water Polo (1)
KINA 105 Water Aerobics (1)
KINA 106 Beginning Scuba (1)
KINA 107 Advanced Scuba (1)
KINA 108 Canoeing (1)
KINA 109 Kayaking (1)
KINA 110 River Rafting (1)
KINA 111 Rock Climbing (1)
KINA 112 Hiking (1)
KINA 113 Beginning Bowling (1)
KINA 114 Intermediate Bowling (1)
KINA 115 Beginning Golf (1)
KINA 115A Disc Golf and Ultimate (1)
KINA 116 Intermediate Golf (1)
KINA 117 Badminton (1)
KINA 118 Karate (1)
KINA 118A Karate II (1)
KINA 119 Archery (1)
KINA 120 Backpacking (1)
KINA 121 Beginning Tennis (1)
KINA 121A Pickleball (1)
KINA 122 Intermediate Tennis (1)
KINA 123 Racquetball (1)
KINA 124 Intermediate Racquetball (1)
KINA 125 Handball (1)
KINA 126 Fitness Walking (1)
KINA 127 Physical Conditioning (1)
KINA 128 Intermediate Weight Training (1)
KINA 129 Weight Training (1)
KINA 130 Fitness (1)
KINA 131 Low-Impact Aerobics (1)
KINA 132 High-Impact Aerobics (1)
KINA 133 Downhill Skiing (1)
KINA 134 Snowboarding (1)
KINA 135 Telemark Skiing (1)
KINA 136 Body Shaping (1)
KINA 137 Fencing (1)
KINA 137A Intermediate Fencing (1)
KINA 138 Step Aerobics (1)
KINA 139 In-Line Skating (1)
KINA 140 Snowshoeing (1)
KINA 141 Mountain Biking (1)
KINA 142 Self-Defense (1)
KINA 143 Orienteering (1)
KINA 144 Pilates (1)
KINA 145 Wrestling (1)
KINA 146 Indoor Cycling (1)
KINA 147 Track and Field (1)
KINA 148 Gymnastics (1)
KINA 149 Broomball (1)
KINA 150 Adaptive Aquatics (1)
KINA 151 Adaptive Physical Activity (1)
KINA 152 Softball (1)
KINA 153 Adaptive Aquatics II (1)
KINA 154 Beginning Ice Hockey (1)
KINA 155 Beginning Ice Skating (1)
KINA 156 Soccer (1)
KINA 157 Adaptive Physical Activity II (1)
KINA 158 Speedball (1)
KINA 159 Aikido (1)
KINA 160A Nordic Skiing (1)
KINA 161 Two-Person Outdoor Volleyball (1)
KINA 162 Volleyball (1)
KINA 163 Intermediate Volleyball (1)
KINA 164 Beginning Basketball (1)
KINA 165 Intermediate Basketball (1)
KINA 166 Flag Football (1)
KINA 166A Touch Rugby (1)
KINA 167 Tai Chi (1)
KINA 168 Hatha Yoga & Relaxation I (1)
KINA 169 Hatha Yoga & Relaxation II (1)
KINA 170 Latin Rhythms (1)
KINA 171 Adaptive Skiing/ Snowboarding (1)
KINA 174 Social Dance (1)
KINA 175 Snorkeling/Free Diving (1)
KINA 176 Horseback Riding (1)
KINA 180A Varsity Men's Football (1)
KINA 180B Varsity Men's Basketball (1)
KINA 180C Varsity Men's Baseball (1)
KINA 180D Varsity Men's Swimming (1)
KINA 180E Varsity Men's Tennis (1)
KINA 180H Varsity Men's Soccer (1)
KINA 180J Varsity Men's Golf (1)
KINA 180K Varsity Men's Track and Field (1)
KINA 180M Varsity Men's Wrestling (1)
KINA 180N Varsity Men's Lacrosse (1)
KINA 180P Varsity Men's Cross Country (1)
KINA 180Q Varsity Men's Hockey (1)
KINA 181B Varsity Women's Basketball (1)
KINA 181D Varsity Women's Swimming (1)
KINA 181E Varsity Women's Tennis (1)
KINA 181F Varsity Women's Volleyball (1)

KINA 181G Varsity Women's Softball (1)
KINA 181H Varsity Women's Soccer (1)
KINA 181J Varsity Women's Golf (1)
KINA 181K Varsity Women's Track & Field (1)
KINA 181N Varsity Women's Lacrosse (1)
KINA 181P Varsity Women's Cross Country (1)
KINA 181R Varsity Women's Sand Volleyball (1)
KINA 182A Varsity Coed Cheerleading (1)
KINA 182B Varsity Coed Cycling (1)
KINA 182C Varsity Coed Rodeo (1)
KINA 182D Varsity Coed Alpine Skiing (1)
KINA 182E Varsity Coed Nordic Skiing (1)

Only one varsity sport activity course at the 100 level may be used to meet the Wellness activity requirement.

Varsity athletics may not be used as elective credit.

KINESIOLOGY-ACADEMIC (KINE)

KINE 100 Health and Wellness (1)
The presentation of information concerning the benefits, positive effects, assessment, and implementation of healthy life styles.

KINE 195 Independent Study (1-3)

KINE 200 History and Philosophy of Sport and Physical Education (3)
Discusses the breadth, scope, and nature of the profession. Orientation to the history and philosophy of human performance and the factors that influence its evolution. Special consideration is given to the history of sport from antiquity to the present, particularly the Olympic Games.

KINE 205 Introduction to Sport Management (3)
Survey and introduction to the field of sport management.

KINE 211 Methods of Lifetime, Individual, and Dual Activities (3)
Instructional content (scope and sequence) and teaching methodology related to various individual, dual and lifetime activities appropriate for K-12 physical education.

KINE 213 Applications of Physical Fitness and Exercise Prescription (3)
Exercise program design and prescription to meet individual needs, assess existing exercise programs, and evaluation of the effectiveness. Major components of cardio-respiratory endurance, muscular strength, muscular endurance, flexibility, and body composition discussed in detail. Prerequisite: KINE 100.

KINE 214 Methods of Team Activities (3)
Instructional content (scope and sequence) and teaching methodology related to various team activities appropriate for K-12 physical education.

KINE 234 Prevention and Care of Athletic Injuries (3)
Procedures and techniques involved in preventing and treating common injuries associated with competitive athletics.

KINE 240 Introduction to Clinical Athletic Training (2)
Introduction to basic athletic training skills, policies, and procedures. Required for admission into the Athletic Training Program. Prerequisite: KINE 234, may be taken concurrently.

KINE 250 Lifeguard Training (3)
Knowledge and skills required towards certification in lifeguard training.

KINE 251 Water Safety Instructor Course (3)
Instructional content (scope and sequence) and teaching methodology related to various aquatic activities.

KINE 252 Principles of Evaluation and Assessment (3)
Introduction to the principles and process of evaluation and assessment. Techniques for general evaluations, and head injuries. Prerequisite: KINE 234 or consent of instructor.

KINE 253 Clinical Experiences in Athletic Training I (2)
Fundamental athletic training skills with concentration on injury prevention, acute injury management and modalities. Prerequisite: Admission into the Athletic Training Education Program.

KINE 256 Methods of Creative Play, Dance, Gymnastics, and Literacy (3)
Instructional content (scope and sequence) and teaching methodology related to creative play, dance, gymnastics and literacy activities. Prerequisite: KINE 211 or KINE 214.

KINE 260 School Health Education (3)
School health issues. Emphasis on development of proper health attitudes and practices, teaching methodology, and application of health knowledge and practice in school and public health situations. Prerequisite: KINE 100.

KINE 265 First Aid and CPR/AED for the Health Care Provider (3)
Knowledge and skills required to meet the needs of first aid and CPR situations that lead to obtaining valid First Aid and CPR/AED for the Health Care Provider cards.

KINE 296 Topics: (1-3)

KINE 297 Practicum (1-2)
Work-oriented instruction involving the implementation of classroom or laboratory experience under the direct supervision of a faculty member.

KINE 301 Health and Fitness Assessment (3)
Health and fitness testing and evaluation for children, athletes, and adults of all ages and abilities. Statistical techniques for exercise testing analyses. Prerequisite: KINE 213.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

KINE 303 Physiology of Exercise (3)
KINE 303L Physiology of Exercise Laboratory (1)
The effects of various types of exercise upon human body structure and function. Three one-hour lectures and one two hour laboratory per week. Prerequisites: KINE 213 and BIOL 209/209L.

KINE 307 Philosophy and Psychology of Coaching (3)
Fundamental philosophical and psychological principles related to coaching competitive athletic teams.

KINE 309 Anatomical Kinesiology (3)
Analysis of joint movement and muscular involvement during physical activity. Prerequisites: BIOL 209/209L.

KINE 310 Methods of Exercise Instruction (3)
Practical experience in teaching safe and effective exercise for multiple populations. Prerequisites: KINE 213 and KINE 309.

KINE 320 Methods of Teaching Physical Education in Elementary Schools (3)
Exploration of the physical education content and teaching methods appropriate for elementary school education. Prerequisites: EDUC 115, EDUC 215, and KINE 256.

KINE 321 Physical Activity and Health in the Classroom (3)
Integration of health and physical activity concepts in the gym and classroom. For education majors.

KINE 333 Community Health (3)
Introduction to the areas of epidemiology, disease prevention and control, environmental health, health care, injury prevention, and safety education.

KINE 335 Sport in Society (3)
The sociology of sport, covering the cultural traditions, social values, and psychosocial experiences of sport from antiquity to today.

KINE 340 Sport Operations (3)
Theoretical background and practical applications designed to provide a framework for the management of resources associated with the planning, implementation and evaluation of festivals and special events.

KINE 342 Sport Law and Risk Management (3)
Legal duties, responsibilities, rights, duties and risk management techniques involved in sport.

KINE 345 Survey of Economics and Finance in Sport (3)
The economic, financial, and managerial accounting concepts for sport. Prerequisite: ECON 201.

KINE 350 Leadership and Ethics in Sport (3)
This course is designed to give individuals an understanding of the various aspects of leadership as well as a survey course of the development and application of moral and ethical values in sport administration settings.

KINE 360 Motor Learning (3)
Foundations of motor learning and the relation of motor performance to other aspects of behavior.

KINE 367 Field Experiences in Athletic Training I (2)
Exploration of athletic training field experiences. Concentration on pre-participation considerations, acute injury management, and environmental conditions. Prerequisite: KINE 253. Corequisite: KINE 368.

KINE 368 Clinical Experiences in Athletic Training II (2)
Athletic training clinical experiences. Concentration on injury care and prevention. Prerequisite: KINE 253. Corequisite: KINE 367.

KINE 370 Biomechanics (3)
KINE 370L Biomechanics Laboratory (1)
Application of mechanical principles and anatomical structure to human movement using quantitative analysis methods. Prerequisites: BIOL 209/209L and KINE 309.

KINE 373 Upper Body Injury Assessment (3)
Evaluation techniques and care of athletic injuries to the head, face and upper extremities. Integration of anatomical structures, physiology principles, and evaluative techniques to provide a basis for critical decision-making in an injury management environment. Prerequisite: KINE 234.

KINE 374 Lower Body Injury Assessment (3)
Evaluation techniques and care of athletic injuries to the trunk and lower extremities. Integration of anatomical structures, physiology principles, and evaluative techniques to provide a basis for critical decision-making in an injury management environment. Prerequisite: KINE 234.

KINE 378 Clinical Experiences in Athletic Training III (2)
Exploration of athletic training clinical experiences. Concentration on psychology, injury prevention, care, and rehabilitation. Prerequisite: KINE 368.

KINE 395 Independent Study (1-3)

KINE 396 Topics (1-3)

KINE 401 Organization/ Administration/Legal Considerations in Physical Education and Sports (3)
Organizational structures, administrative techniques, and legal considerations in physical education and sports.

KINE 402 Sport Marketing (3)
The application of the principles of promotion and marketing to the sport and fitness industry including the areas of professional sports, corporate fitness, college/high school athletics, clubs and resorts, and others. Prerequisite: MARK 231.

KINE 403 Advanced Strength and Conditioning (3)
Emphasis on strength and conditioning program design and considerations based on activity and sport type. Prerequisites: KINA 128 or KINA 180-193, and KINE 303/303L.

Certain courses are only offered during the fall or spring semesters, or may be available only in alternating years. It is the student's responsibility to meet with their advisor and/or check the two-year course planning calendar on the Colorado Mesa University website for course availability. Learn more at **coloradomesa.edu/academics**.

KINE 404 Clinical Exercise Physiology and Advanced Exercise Prescription (3)
Emphasis on clinical risk stratification for conducting health and fitness assessments and exercise program design for healthy individuals and individuals with medically controlled disease. Prerequisites: KINE 303/303L.

KINE 405 Sports Nutrition (3)
In-depth study of macronutrient metabolism as it relates to sport. Practical consideration in the use or non-use of carbohydrate supplements, vitamins, and/or other ergogenic aids. Three one-hour lectures per week. Prerequisites: KINE 303/KINE 303L.

KINE 406 Governance and Communication in Sport (3)
The laws and rules governing various sport organizations from interscholastic to professional sport as well as the major means of sport communication.

KINE 408 Methods of Teaching Physical Education in Secondary Schools (3)
Instructional strategies on a practical application level for prospective secondary physical education teachers preparatory to entry into student teaching. Field experiences are required to supplement lectures and discussions. Prerequisites: EDUC 115, EDUC 215, and KINE 214.

KINE 410 Rehabilitative Exercises (3)
Review of the theoretical and scientific basis for, and the practical use of, traditional and recently emerging rehabilitative techniques utilized in the rehabilitation of acute, post acute, and chronic musculoskeletal injuries. Prerequisite: KINE 234.

KINE 411 Worksite Health Promotion (3)
Covers worksite health promotion: its description, planning, implementation, marketing, and evaluation. Prerequisite: KINE 213.

KINE 415 Physical Activity and Aging (3)
The study of the dynamic relationship between physical activity and the aging process. Course focuses on the impact of physical activity on the physiological, psychological, and social well-being of older adults. Prerequisites: KINE 303/303L.

KINE 420 Therapeutic Modalities (3)
Review of the theoretical and scientific basis for, and the practical use of, contemporary therapeutic modalities and techniques utilized in the treatment of acute and chronic musculoskeletal injuries. Prerequisite: KINE 234.

KINE 430 Medical Conditions and Pharmacology in Sports (3)
An overview of the effects on physical activity resulting from the pre-existence of selected medical conditions and the use of pharmacological agents.

KINE 467 Field Experiences in Athletic Training II (2)
Athletic training field experiences. Concentration on Injury Prevention, Acute Injury Management and Health Care Administration. Prerequisite: KINE 378. Corequisite: KINE 468.

KINE 468 Clinical Experiences in Athletic Training IV (2)
Exploration of athletic training clinical experiences. Concentration on administration and professional development. Prerequisites: KINE 378. Corequisite: KINE 467.

KINE 478 Clinical Experiences in Athletic Training V (2)
Exploration of athletic training clinical experiences. Concentration on injury and illness evaluation and rehabilitation. Capstone course for the Athletic Training Program. Prerequisite: KINE 468.

KINE 480 Inclusive Physical Activity (3)
Study of physical activities, modifications, and adaptations for individuals with disabilities.

KINE 487 Structured Research (1-3)
Capstone research experience with a formal manuscript and presentation. Topic, methods, and writing are to be guided and approved by a faculty member. Prerequisite: KINE 303, Senior standing, and consent of instructor.

KINE 494 Kinesiology Senior Seminar (1)
Discussion and research of current issues in kinesiology and exercise physiology. Prerequisite: Senior status.

KINE 494A Sport Management Senior Seminar (1)
Discussion and research of current issues in sport management.

KINE 495 Independent Study (1-3)

KINE 496 Topics (1-3)

KINE 497 Pre-Internship in Physical Education (3)
K-12 physical education majors study teaching and standard-based education in a physical education setting. One hundred twenty laboratory hours required. Prerequisite: KINE 320, 408, senior standing.

KINE 499 Internship (3-12)
Work experience obtained on a job where assignments are related to the student's specific concentration area within the Kinesiology degree. Prerequisites: Kinesiology major, senior standing.

KINE 500 Facility and Equipment Management in Sport and Fitness (3)
Provides an in-depth study of the facilities and equipment used in a variety of sport and fitness settings, from public to private organizations, educational settings, athletics (interscholastic, intercollegiate, and professional sports) as well as commercial and corporate fitness centers. The focus is on designing, planning, funding, and maintaining a facility as well as the equipment necessary for its successful operation.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

KINE 510 Event and Program Management in Sport and Fitness (3)
Duties and responsibilities of sport and fitness managers in creating policies, conducting events, and developing programs for sport or fitness organizations. Includes extensive examination of the topics and issues involved in the planning, funding, promotion, implementation, and evaluation of events and programs.

KINE 520 Management Policies and Regulations in Sport and Fitness (3)
Study of managerial policies and regulations to specific sport and fitness organizations to include educational , athletic, commercial and corporate entities. Topics will include the following: human resource management; labor relations; policy issues; sponsorship; budgeting; federal, state, and local statues; CHSAA and NCAA rules and guidelines; and professional organization policies. Specific attention will be given to compliance strategies.

KINE 530 Advanced Coaching for Basketball (1)
Examination of the trends, techniques, methods and philosophies in coaching basketball at skilled levels. Specific attention is given to video analysis and game management.

KINE 534 Advanced Injury Management for Coaches (1)
Specialized procedures and techniques involved in the prevention and management of common athletic injuries.

LAND SURVEYING (SURV)

SURV 100 Introduction to Surveying/Field Work (3)
Introduction to the basics of geomatics, including how to evaluate survey data accuracy and assess data limitations. Expectations of data analysis for engineering designs, property surveys, and construction layout staking will also be covered.

SURV 102 Surveying Calculations I (3)
Introduction to the mathematical concepts required for proper surveying, including the application of algebraic principles, trigonometry functions, and other concepts that are necessary in this field and in which proficiency is required by state regulations. Course work will include theory, errors and analysis, differentiation and trigonometric leveling, angles and directions, coordinate systems and calculations, and other relevant material.

SURV 200 Advanced Surveying Field Work (4)
Introduction to surveying methodology, survey design, planning and observing, and real-time kinematics. Students will also explore geodesy, state plane coordinates and the concepts of least squares analysis of survey adjustments. The labs - either two 3-hour weekday labs or one 6-hour weekend lab - will enable students to understand and master the practical aspects of these important surveying elements.

SURV 203 Legal Aspects of Surveying (3)
Exploration of records research and its importance in surveying, as well as understanding the public, private and quasi-public recorded and non-recorded record databases that establish land ownership and boundaries, easement boundaries, land-use rights and restrictions. Students will use these resources in applying surveying principles to both private and public lands.

SURV 204 Real Property Descriptions (2)
Exploration of historical and current issues relevant to writing land descriptions and using those descriptions for the practicing surveyor. Students will also gain a working knowledge of the relationship between written descriptions and field survey data, as well as how to interpret historic descriptions and the underlying principles of producing descriptions.

SURV 205 Advanced Surveying Computations/ Calculations (4)
Introduction to advanced surveying computation concepts and procedures, including traverse error analysis, topographical surveying, mapping, and astronomical observations.

SURV 206 Property Law - Boundary Evidence (3)
Introduction to the foundational Common Law knowledge relevant to the surveying profession, practical application of that law, documentation of survey evidence, and the laws of boundary location.

SURV 207 Surveying Ethics: An Overview of Ethical Expectations (2)
Introduction to the surveyor's liability, statutes of limitation as applied to the profession, and the surveyor's role in court. Students will also understand the fundamental principles of real property law as applied to surveying with case studies reflecting common determinations of ownership and the surveyor's judiciary role in real property ownership.

SURV 298 Internship and Capstone Project (4)
Demonstration of proficiency in the required surveying-specific knowledge to pass the Colorado exams through an internship and delivery of a capstone project on a mutually agreed upon topic.

MACHINING AND MANUFACTURING TRADES (MAMT)

MAMT 101 Introduction to Manufacturing (2)
The course is designed to give the student a broad overview of the world of manufacturing. The course will include people, materials, machines, design, organization, waste, quality, and other subjects which effect society and production of a product.

MAMT 102 Machining Fundamentals (1)
Concentrated unit dealing with speeds and feeds of machines, materials, tooling, tapping, boring, and manufacturing processes.

MAMT 105 Print Reading and Sketching (2)
Reading of blueprints and process sheets as used in industry, application of that information to various manufacturing processes.

MAMT 106 Geometric Tolerancing (2)
Identification, interpretation, and application of the blueprint symbols (referred to as Geometric Tolerancing symbols) in machining and inspection operations. Corequisite: MAMT 105 or consent of instructor.

MAMT 110 Gauging and Measuring Tools (1)
Uses and techniques of inspection including micrometers, Vernier scales, instruments, hole gauges in surface plate work, finish of parts and overall inspection techniques. Prerequisite: MAMT 106 or consent of instructor.

MAMT 115 Introduction to Machine Shop (3)
Safety procedures: using bench tools, layout tools, power saws, and taps; sharpening general purpose drills, grinding lathe bits; and identifying and operating basic machines such as the bench grinder, drill press, band saw, and others. One hour lecture and three hours laboratory per week.

MAMT 120 Machine Technology I (4)
Operation of engine lathes, milling machines and surface grinders. One hour lecture and five hours laboratory per week. Prerequisite: consent of instructor.

MAMT 125 Machine Technology II (4)
Further development of skills acquired in MAMT 120. Emphasis will be placed on technical aspects of tooling and machining tolerances. One hour lecture and five hours laboratory per week.

MAMT 135 Job Shop Machining I (3)
Production of machined parts from a shop blueprint, writing process sheets, and estimating machine time. Machining of parts may involve one or more machine operations. Machine time, paperwork, inspection, and accuracy will be emphasized. One hour lecture and three hours laboratory per week. Prerequisite: consent of instructor.

MAMT 145 Machine Maintenance (2)
Maintaining, lubricating, and repairing machinery including making gib adjustments, selecting and using proper lubricants and selecting or manufacturing parts of making repairs with emphasis on workmanship and inspection. One hour lecture, one and one-half hours laboratory per week. Prerequisite: consent of instructor.

MAMT 148 CNC Applications (3)
Introduction to Computer Numerical Control programming basics, CAM software and tooling used in today's manufacturing CNC Milling machines and CNC lathes.

MAMT 150 Introduction to Numerical Control (1)
Numerical control/computerized numerical control machining, its advantages and how it operates. The course is designed as an informational unit for customized pre-employment training.

MAMT 170 Practical Applications (3)
Students will gain a working knowledge in manufacturing through Co-op, internship, work experience or required lab work in industrial study if outside work cannot be acquired. Prerequisite: Instructor permission.

MAMT 196 Topics (1-3)

MAMT 207 Introduction to Statistical Process Control (2)
Introduction to the philosophical and economic bases for statistical process control and its use; mathematical and nonmathematical SPC techniques with emphasis on application.

MAMT 230 Machine Technology III (4)
Exploration of advanced machine operations including O.D. grinding, cutter tool grinding, gear cutting, indexing, and rotary table work with an emphasis on workmanship, accuracy, and inspection.

MAMT 240 Job Shop Machining II (3)
Comprehensive capstone course utilizing all the machine tools in the machining laboratory. Further development of writing process sheets, estimating machine time, and performing final inspections on finished projects. Development of prototypes and reverse-engineering concepts using CNC machine tools and 3D printers. Final design presentation and written report.

MAMT 250 Process Systems Technology (2)
Advanced concepts of the philosophical and economic bases for statistical process control and its uses; mathematical and non-mathematical SPC techniques with emphasis of application.

MAMT 250L Process Systems Technology Laboratory (2)
Advanced concepts of the philosophical and economic bases for statistical process control and its uses; mathematical and non-mathematical SPC techniques with emphasis of application.

MAMT 251 CNC Machining I (3)
Exploration of computerized numerical control machining operations, including control of functions, programming format, CNC maching setup and operation.

MAMT 255 CNC Machining II (3)
Further development of concepts introduced in MAMT 251. Emphasis of advanced operations of CNC machine tools.

MAMT 260 Properties of Materials (3)
Exploration of the processes of smelting and refining various types of metals.

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Discussions and demonstrations on heat-treatment, hardness testing and molecular manipulation of metals.

MAMT 295 Independent Study (1-3)

MAMT 296 Topics (1-3)

MANAGEMENT (MANG)

MANG 121 Human Relations In Business (3)
Human side of organizations: morale, motivation, human needs, minorities as working partners, leadership styles, organizational environment, and other human forces having an impact on business structures.

MANG 201 Principles of Management (3)
Management as the process of achieving organizational goals or objectives by and through others. Emphasizes functions performed by managers and how they are influenced by forces both within and outside the organization. Managers' use of resources will be investigated.

MANG 201A Principles of Management : Part 1 of 3 (1)
Introduction to the activities of management and decision making in the global environment, with an emphasis on leadership and managing change and innovation.

MANG 201B Principles of Management: Part 2 of 3 (1)
Introduction to management planning, goal setting, organizing, human resources, teams, and organizational behavior.

MANG 201C Principles of Management: Part 3 of 3 (1)
Introduction to management control, quality, the role of information technology, and electronic business.

MANG 221 Supervisory Concepts and Practices (3)
For practicing or potential supervisors and managers who hold or will hold first-line to middle-level management positions. Focuses on the management functions of planning, organizing, staffing, directing, and controlling and their relation to the daily job of the supervisor.

MANG 296 Topics: (1-3)

MANG 299 Internship (3-6)
Practical workplace experience under the joint supervision of the employer and the internship coordinator. Designed for business majors working in the business environment. Prerequisites: ACCT 201, BUGB 101, BUGB 211, and CISB 101.

MANG 301 Organizational Behavior (3)
Human behavior, its causes and effects in organizational settings. Description of and development of an understanding of human behavior in such settings. Prerequisite: MANG 201 or consent of instructor.

MANG 341 Quantitative Decision Making (3)
Application of inferential statistics to realistic business situations; use of quantitative tools to enhance business decision-making ability. Descriptive statistics for data summarization, probability theory, distributions, estimation, and index numbers with emphasis on hypothesis testing, analysis of variance, regression/correlation, time series, and introduction to operations research and linear programming. Prerequisites: MATH 113 or higher, and CISB 241 or STAT 241.

MANG 395 Independent Study (1-3)

MANG 396 Topics (1-3)

MANG 401 Strategic Consulting (3)
Students are placed in the role of consultant for an area business furnishing management assistance to the small business community. Businesses benefit from the insight of student recommendations. Provides students practical training, supplementing academic theory by handling problems in a real business environment. Prerequisite: Consent of instructor.

MANG 402 Advanced Problems in Small Business Operations II (6)
Continuation of MANG 401. Prerequisites: MANG 302 and/or consent of instructor. (Not necessary to complete MANG 401 before 402.)

MANG 410 Effective Workplace Communication (3)
Application of communication methods including: personal selling, negotiation, interviewing, and individual and group presentations. Emphasis placed upon application of effective practices used in communicating in today's business world. Prerequisites: Junior/Senior standing, or permission of the instructor.

MANG 421 Credit and Collection Management (3)
Consumer and commercial credit in relationship to the management of credit by business firms, legal aspects of credit extension and current legislation. Information on credit operations of business for both students of business and practicing businessmen. Prerequisites: ACCT 202, MANG 201 or consent of instructor.

MANG 442 Experiential Management: Student Run Business (3)
Principles of developing/operating a functioning business. Track and analyze records of a student-run business. Analyze data, apply theory and practical experience to effect positive change. Work with CMU administration and government regulators to assure rules and regulations followed. Prerequisite: Instructor approval.

MANG 451 Career Research and Development (3)
Principles and techniques involved in a job search with emphasis on conducting career research, identification of goals, preparing a job campaign, and elements of a job interview. Preparation of a job kit including a prospect list, resume, cover letter, advertisements, prospect letters, and sales and follow-up letters which can be used in a job search. Prerequisite: senior standing or consent of instructor.

MANG 471 Operations Management (3)
The use of resources in producing goods and services; concepts of planning, scheduling, and controlling productive activities and physical resources. Prerequisites: FINA 301, Senior standing.

MANG 491 Business Strategy (3)
Duties and responsibilities of decision makers in analyzing the organization, its operating environment and the subsequent development of objectives, policies, and long term planning for organizations. Includes complex cases taken from actual experiences in situations involving analysis, planning, and decision making. Required of all BBA and BS Accounting students. To be taken last semester of program. Prerequisites: ACCT 201, ACCT 202, BUGB 105, BUGB 349, CISB 101, FINA 301, MANG 201, MARK 231, or permission of the instructor.

MANG 495 Independent Study (1-3)

MANG 496 Topics (1-3)

MANG 499 Internship (1-9)
Provides BBA students with an opportunity to learn more about management functions and activities through exposure to an actual business or agency environment. Observation and participation in management activities enable students to relate classroom theory to on-the-job experiences. Prerequisites: BBA major, second semester junior or senior, written consent of instructor prior to registration.

MANG 500 Advanced Management Theory (3)
Designed to advance the student's understanding of management theories and the application of these theories to the business world. Contemporary issues will be discussed.

MANG 501 Production and Operations Management (3)
Competitive strategies and strategic impact of the transformation process in a global economy. Operations management issues including quality, inventory management, management of technology, manufacturing planning and control, just-in-time manufacturing and optimized production technology. Impact of business system on productivity and profits.

MANG 510 Leading Organizations (3)
Designed to encourage the application of diverse conceptual and theoretical perspectives to the analysis and control of behavior in organizations. Practice in diagnosing organizational problems is gained by combining the use of theories, texts, readings, cases and exercise. The course focuses on problems related to perception, motivation, leadership, cultural diversity, interpersonal and group conflict, stress, work-family conflict, influence, decision-making, ethics, international management issues and change.

MANG 540 Advanced Quantitative Methods (3)
Analytical models to support decision making. Topics include linear optimization, sensitivity analysis, linear regression, decision making under uncertainty, decision making under risk, project management, transportation and assignment methods, and forecasting.

MANG 590 Business Strategy (3)
The capstone course in the MBA program. The purpose of this course is to develop an understanding of strategic management and the "how" and "why" of strategic decisions. Emphasis is also placed on how the manager goes about translating strategy into action and achieves integration in the organization. Integration involves the functional areas of management and how to balance the trade-offs from the perspective of strategic decision making at the top management level. Prerequisite: Permission of instructor.

MARKETING (MARK)

MARK 231 Principles of Marketing (3)
Use and development of marketing strategy and the effects of buyer motivation. Major functions of marketing, buying, selling, distribution, pricing, advertising, and storage are studied. A contrast is made between the two marketing institutions: wholesaling and retailing.

MARK 325 Consumer Behavior (3)
Overview of the processes involved when individuals or groups select, purchase, use or dispose of products and services to satisfy needs and desires. Prerequisite: MARK 231.

MARK 332 Promotion (3)
Overview of the many ways in which goods, services, and ideas can be promoted to consumers and businesses through advertising, public relations, and publicity. Prerequisite: MARK 231.

MARK 335 Sales and Sales Management (3)
The salesperson as a counselor whose role is to help buyers make better decisions. Professional salesmanship is recognized as an integral function in modern society, with basic sales techniques studied and practiced in sales presentations. The course is taught from a management perspective. Prerequisite: MARK 231.

MARK 340 Creating Marketing Materials (3)
Overview and process development for creating marketing materials for all supply chain stakeholders. Development and analysis of multi-faceted levels of business marketing. Prerequisites: MARK 231.

MARK 350 Marketing Research (3)
Marketing research theory and techniques designed to educate the student in the use of the scientific method, develop analytical ability, present basic marketing research tools, and develop proficiency in the art of writing research reports. Cases and actual research projects will be utilized. Prerequisites: CISB 241 or STAT 241.

MARK 360 Services Marketing (3)
Application of marketing concepts and strategies for addressing marketing problems and opportunities in the service sector (Finance, Hospitality, and Healthcare). Prerequisite: MARK

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231, MARK 350 or permission of the instructor. Course will utilize case problems and an actual research project.

MARK 395 Independent Study (1-3)

MARK 396 Topics (1-3)

MARK 402 Sport Marketing (3)
The application of the principles of promotion and marketing to the sport and fitness industry including the areas of professional sports, corporate fitness, college/high school athletics, clubs and resorts, and others. Prerequisite: MARK 231.

MARK 432 Advanced Marketing (3)
In-depth complex marketing problems confronting modern business. Development of marketing strategy to allow the firm to progress toward its corporate objectives. Prerequisites: MARK 231, 350.

MARK 495 Independent Study (1-3)

MARK 496 Topics (1-3)

MARK 500 Marketing Strategy (3)
Examines the state-of-the-art in marketing strategy from both a practical and theoretical perspective. Focusing on integrating a broad range of marketing concepts, the emphasis is on setting realistic marketing objectives, understanding marketing research concepts, demographic market segmentation,and current marketing topics.

MASS COMMUNICATION (MASS)

MASS 110 Mass Media: Impact and History-GTAH2 (3)
Role played by media in everyday life and media's social, economic, and historical influence on society.

MASS 140 Media Theory Introduction (3)
Introduction to theories of Mass Communication. Exploration of theory constructs, audience research, effects of emerging media and technologies, and message content. Prerequisite: MASS 110 or consent of instructor.

MASS 144 Multimedia Storytelling (3)
Journalism-based techniques and methods for modern storytelling of accurately written information through the use of the internet, video, and audio. Focus on storytelling that can be posted quickly through the use of flip cameras and inexpensive editing software. Prerequisites: MASS 110 or consent of instructor.

MASS 196 Topics (1-3)

MASS 213 Introduction to Media Writing and Reporting (3)
Fundamentals of news gathering and reporting through a variety of media. Exploration of ethical and legal aspects of journalistic endeavors. Submitted stories may be published. Prerequisites: MASS 140 and MASS 144, or consent of instructor.

MASS 251 Mass Media: Advertising and Promotions (3)
Principles of media advertising and promotions. Considers research, analysis, strategy, advertising barriers, design, and perspective. Production for media. Prerequisites: MASS 140 and MASS 144, or consent of instructor.

MASS 261 Audio Announcing and Production (3)
Exploration of the art and science of announcing for media and the importance and use of the spoken word in persuasive messages. Creation and execution of programs and formats for audio source distribution both traditional and emerging. Prerequisites: MASS 140 and MASS 143, or consent of instructor.

MASS 271 Video Production (3)
Fundamentals of electronic field production and non-linear editing with hands-on experience with broadcast-quality equipment. Creation and execution of productions involves videography, scripting, graphic layout and editing.

MASS 296 Topics (1-3)

MASS 297 Practicum (1)
Practical experience with student media outlets under faculty advisor supervision or with CMU Sports Information. Practicum coordinator must be consulted in first week of term. Prerequisite: consent of instructor.

MASS 310 Media Law and Ethics (3)
Ethical principles and laws affecting media. Includes study and application of ethics and laws involved in print, broadcasting, and emerging media. Freedom of Press, Fair Trial, Privacy, Right to Know, Freedom of Information, Fairness Doctrine, Cameras in Courtroom, Obscenity, Censorship, and Sunshine Laws considered. Prerequisite: MASS 213 or consent of instructor.

MASS 313 Broadcast Journalism Reporting (3)
Introduction to broadcast writing styles and history. Specific applications for radio, television, and internet. Emphasis on format, newsgathering, interviewing, research, and the creation of a portfolio of writing samples. Prerequisite: MASS 213 or consent of instructor.

MASS 315A Specialized Writing for Media: Science (3)
Speciality writing about Science for various media platforms. Prerequisite: MASS 213.

MASS 315B Specialized Writing for Media: Sports (3)
Specialized writing about Sports for various media platforms. Prerequisite: MASS 213.

MASS 315C Specialized Writing for Media: Health (3)
Specialty writing about Health for various media platforms. Prerequisite: MASS 213.

MASS 315D Specialized Writing for Media: Crime (3)
Specialty writing about Crime for various media platforms. Prerequisite: MASS 213.

MASS 317 Writing Opinion for Impact (3)
Persuasive and insightful writing. Subjects include public issues, supporting beliefs, analysis, and

documentation for targeted audiences through broadcast, print, and internet/web. Practical applications in researching, interviewing, and writing editorials and commentaries. Prerequisite: MASS 213 or consent of instructor.

MASS 342 Photojournalism I (3)
Fundamentals of camera techniques, qualities of print and digital images, history and ethics of photojournalism, uses of software in image acquisition and use, and development of esthetic values. Prerequisite: MASS 213 or consent of instructor.

MASS 350 Public Relations Concepts (3)
Historical and theoretical approach to contemporary public relations with emphasis on the persuasion process and ethics, propaganda, and advertising techniques in the mass media. Prerequisite: MASS 213 or consent of instructor.

MASS 352 Design and Editing for Print (3)
Examinations and evaluations of articles, copy editing, writing headlines and titles, page design for newspapers, magazines, brochures, and the duties of a publication editor. Prerequisite: MASS 213 or consent of instructor.

MASS 357 Documentary and News Producing (3)
Creation of multimedia content for students to develop their skills as producers, researchers, interviewers, writers, and videographers, as well as on-camera and voice talent. The focus of study will be on analyzing and practicing the aesthetic and technical elements of documentary and news content in order to create original stories for broadcast, print, and web.

MASS 372 TV Studio Production (3)
Combination of multi-camera studio and electronic field productions. Includes videography, live-editing, non-linear editing, graphic creation, audio manipulation and script writing, culminating in broadcast- quality programming.

MASS 387 Structured Research (1-3)

MASS 395 Independent Study (1-3)

MASS 396 Topics (1-3)

MASS 397 Practicum (1)
Practical experience with student media outlets under faculty advisor supervision or with CMU Sports Information. Practicum coordinator must be consulted in first week of term. Prerequisites: MASS 140 and MASS 144 or consent of instructor.

MASS 415 Advanced Media Writing and Reporting (3)
Development of abilities to interview, research public records, report facts fairly, and write under deadline pressure. Critical attention paid to law and ethics. Prerequisite: MASS 213 or consent of instructor.

MASS 417 Writing for Public Relations and Advertising (3)
Emphasizes copywriting function in public relations and advertising for organizations and agencies. Prerequisite: MASS 213 or consent of instructor.

MASS 441 Emerging Media (3)
Experimentation via tools, techniques, and concepts of social and new media resulting in the creation of an online newspaper. Prerequisite: MASS 213 or consent of instructor.

MASS 442 Photojournalism II (3)
Considers advanced skills necessary to capture and edit images to high esthetic values, professionalism, news photography, photo illustration, creation of image portfolios for public display or potential employers, and use of image management software. Prerequisite: MASS 342 or consent of instructor.

MASS 450 Public Relations Campaigns (3)
Campaigns and case histories presenting the scope of PR, research methodology, and audience targeting. Practical application of PR theory. Prerequisite: MASS 350 or consent of instructor.

MASS 452 Designing for Brand and Message (3)
Publishing attractive and effective communication via software used by media professionals. Includes designing print materials such as company newsletters, logos, brochures, magazines, as well as electronic publishing.

MASS 471 Advanced Video Production (3)
Emphasis on aesthetic values of electronic field productions and post-production projects. Builds upon concepts and skills acquired in MASS 271 to create and execute high quality video and creative productions for air and/or web use. Prerequisite: MASS 271.

MASS 494 Seminar, Theory and Research (3)
Capstone course. Examination and exploration of mass communication theories in light of history and development of media messages and the channels through which they travel. Focus on research and its importance to media disciplines and industries. Prerequisite: MASS 213 or consent of instructor.

MASS 495 Independent Study (1-3)

MASS 496 Topics (1-3)

MASS 497 Practicum (1)
Practical experience with student media outlets under faculty advisor supervision or with CMU Sports Information. Practicum coordinator must be consulted in first week of term. Prerequisite: MASS 397 or consent of instructor.

MASS 498 Senior Project Portfolio (1)
Identification and preparation of off-campus projects that highlight Mass Communication skills, abilities, talents, and applications. Supervision and guidance provided by a faculty member. Works created will be formally presented to a review board. Prerequisites: MASS 213 and MASS 397 or consent of instructor.

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MASS 499 Internship (3-12)
Work in newspapers, radio, television, advertising or public relations positions, or other situations that meet instructor's approval. Prerequisite: At least junior standing with at least half of major requirements completed; MASS 213, MASS 310.

MATHEMATICS: FOUNDATIONS (MATC)

MATC 090 Introductory Algebra (4)
Introduction to algebra with a review of basic arithmetic. Includes decimals, fractions, percentage, ratio, proportion, signed numbers, algebraic expressions, factoring, exponents and radicals, linear equations, functions and graphs. Prerequisite: Accuplacer score of 45-60.

MATC 091 Intermediate Algebra (4)
Further study in topics of algebra. Includes properties of real and complex numbers; laws of exponents and radicals; factoring polynomials; solving linear and quadratic equations and inequalities; rational expressions and complex fractions; introduction to functions and relations; applications. Prerequisites: MATC 090 or equivalent, or appropriate Accuplacer score.

MATC 096 Topics: (1-4)

MATHEMATICS (MATH)

A graphic calculator is recommended or required for several mathematics courses. See department for recommended models. In order to take any of the following mathematics courses, each listed prerequisite (or an equivalent course) must be completed with a grade of a "C" or better. The instructor may waive the prerequisite.

MATH 101 Review in Mathematics (1)
Review of mathematical concepts and computations. Content will vary and topics will be chosen to prepare students for a specific subsequent course. Prerequisite: permission of instructor.

MATH 105 Elements of Mathematics I (3)
Mathematics for the prospective elementary teacher with an emphasis on understanding mathematical reasoning and processes. Topics include problem solving, set theory, number theory, numeration systems, the integers and rational numbers. Prerequisites: Appropriate mathematics placement test score and interview, and consent of instructor.

MATH 107 Career Math (3)
Covers material designed for career technical or general studies students who need to study particular mathematical topics. Topics include measurement, algebra, geometry, trigonometry, graphs, and/or finance. These are presented on an introductory level and the emphasis is on applications.

MATH 108 Technical Mathematics (4)
Covers material designed for career technical or general studies students who need to study particular mathematical topics. Topics may include measurement, algebra, geometry, trigonometry, graphs, and/or finance. These are presented on an introductory level and the emphasis is on applications.

✓ **MATH 110 College Mathematics-GTMA1 (3)**
Essential mathematical concepts for B.A. students. Topics include logic, set theory, solving equations, basic inequalities, combinatorics, probability, descriptive statistics, geometry, consumer mathematics and the appropriate use of calculators Prerequisites: MATC 091 or equivalent or appropriate mathematics placement test score.

✓ **MATH 113 College Algebra-GTMA1 (4)**
A college-level treatment of algebra. Topics include algebraic properties of the integers, rationals, real and complex numbers; techniques for manipulation of expressions; techniques for solving linear, non-linear, absolute value equations, and inequalities; techniques for solving systems of equations; the Cartesian plane, relations and functions; properties and graphs of polynomial, rational, exponential, logarithmic and inverse functions; conic sections. Prerequisite: MATH 091 or equivalent, or appropriate mathematics placement test score.

✓ **MATH 119 Precalculus Mathematics-GTMA1 (5)**
An in-depth treatment of the mathematics essential to Calculus. Topics include the Cartesian plane, functions; polynomial, rational, exponential, logarithmic, inverse, circular and trigonometric functions; solving inequalities and systems of equations. Additional topics may include matrices, determinants and vectors. Prerequisite: MATH 113 or equivalent, or appropriate mathematics placement test score.

MATH 121 Calculus for Business (3)
An introduction to calculus with an emphasis on applications to business and economics. Topics include linear and quadratic functions, limits, continuity, differentiation, integration, the logarithmic and exponential functions, and applications. Computer algebra systems will be used where applicable. Current college algebra skills and graphic calculator are required. Prerequisite: MATH 113 or equivalent, or appropriate mathematics placement test score.

MATH 127 Mathematics of Finance (3)
Simple interest, simple discount, compound interest, continuously compounded interest, annuities, perpetuities, capitalization, determining payment size, determining outstanding principal, and constructing amortization schedules, including the derivation of mathematical formulae and the methods for solving many financial problems. Prerequisites: MATH 113 or consent of instructor.

MATH 130 Trigonometry (3)
A college-level treatment of trigonometry. Topics include the Cartesian plane, functions, inverse functions, the circular function, trigonometric functions, graphs of trigonometric functions, trigonometric

identities, solving trigonometric equations, inverse trigonometric functions, triangle solution techniques and vectors. Prerequisite: MATH 113 or equivalent, or appropriate mathematics placement test score.

MATH 135 Engineering Calculus I (4)
Introduction to differentiation and integration of functions of a single variable. Emphasis on computational aspects. Includes functions, limits, continuity, differentiation, related rates, optimization problems, graphing, integration and applications. Prerequisite: MATH 119, or appropriate mathematics placement score.

MATH 136 Engineering Calculus II (4)
Continuation of MATH 135 Engineering Calculus I. Includes techniques of integration, trigonometric and hyperbolic functions, inverse, logarithmic and exponential functions, sequences, series, conic sections, polar coordinates and parametric equations. Prerequisite: MATH 135 or MATH 151.

MATH 141 Analytical Geometry (3)
A college-level treatment of analytic geometry. Topics include Cartesian coordinate systems, distance, parallel and perpendicular lines and planes, the locus of a condition, generalizations of lines, planes and parabolas, polar coordinates and vectors in two and three dimensions. Prerequisites: MATH 130 or consent of instructor.

MATH 146 Calculus for Biological Sciences (5)
An introduction to calculus with an emphasis on applications to biology. Topics include functions, properties and graphs of polynomials, rational functions, the trigonometric, inverse, exponential and logarithmic functions, limits, continuity, differentiation, related rates, min-max problems, integration and applications of biology. Prerequisite: MATH 113 or consent of instructor.

MATH 147 Introduction to Computer Algebra Systems (1)
Introduction to computer algebra using an appropriate computer algebra system (CAS) such as Maple, Mathematica, Derive, etc. Topics will include the syntax and simple programming of the CAS used. Assignments and projects will emphasize applications in Calculus. Prerequisite: MATH 119. Corequisite: MATH 151.

✓ MATH 149 Honors Mathematics-GTMA1 (3)
An in-depth exploration of mathematical concepts, with an emphasis on the process of mathematical discovery. Topics are left to the discretion of the instructor, and typically include an introduction to more advanced topics such as group theory or graph theory. This course fulfills the essential learning requirement for students in the Honors Program. Prerequisite: Permission to enroll is required.

✓ MATH 150 Topics and Careers in Mathematics (1)
Introduction to the nature of mathematical thinking. Advanced topics and applications of mathematics and statistics will be presented at an introductory level. Career options will be investigated. Prerequisite: MATH 151 or MATH 135 or MATH 146 (any of these courses may be taken concurrently with MATH 150).

MATH 151 Calculus I-GT-MA1 (5)
An introduction to differentiation and integration of functions of a single variable. Topics include functions, limits, continuity, differentiation, related rates, min-max problems, graphing, integration and applications. Prerequisite: MATH 119, or appropriate mathematics placement test score.

MATH 152 Calculus II (5)
A continuation of MATH 151 Calculus I. Topics include techniques of integration, trigonometric and hyperbolic functions, inverse, logarithmic and exponential functions, sequences, series, conic sections, polar coordinates and parametric equations. Prerequisite: MATH 151.

MATH 196 Topics (1-4)

✓ MATH 205 Elements of Mathematics II-GTMA1 (3)
Decimal numbers, probability, statistics, geometry, and the metric system. A continuation of MATH 105 designed for the prospective elementary teacher. Prerequisite: MATH 105 or consent of instructor.

MATH 225 Computational Linear Algebra (2)
A computational approach to matrices, determinates, systems of equations, vector spaces, linear transformations, eigenvectors and eigenvalues, as well as their applications. Computational methods will be used to explore and investigate the traditional subjects of linear algebra. Prerequisites: MATH 151 or MATH 135 or MATH 146.

MATH 236 Differential Equations and Linear Algebra (4)
Introduction to ordinary differential equations and linear algebra. Topics covered include ordinary differential equations, systems of linear equations, matrices, determinants, vector spaces, linear transformations, and systems of linear differential equations. Prerequisite: MATH 152 or MATH 136.

MATH 240 Introduction to Advanced Mathematics (4)
An introduction to writing mathematical proofs. This course is designed to provide students with a transition from computationally-based lower level classes to proof-based upper level classes. The primary goal of the course is to train students to construct and analyze rigorous mathematical proofs. Topics include introductory logic, set theory, relations, functions, induction, equivalence relations, partitions and combinatorics. Prerequisite: MATH 152.

MATH 253 Calculus III (4)
Vectors in three-dimensional space, vector functions, partial derivatives, directional derivative and multiple integrals. Prerequisite: MATH 136 or MATH 152.

MATH 260 Differential Equations (3)
Techniques of solving differential equations of order one, linear

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differential equations, linear equations with constant coefficients, non-homogeneous equations, variation of parameter techniques, and Laplace transform methods. Prerequisite: MATH 152 or MATH 136.

MATH 296 Topics (1-3)

MATH 301 Mathematics for Elementary Teachers (3)
A selection of mathematics topics addressing content and standards for elementary education. Strong emphasis on written and oral communication. Prerequisite: MATH 205 and formal acceptance into the Teacher Education Program, or consent of instructor.

MATH 305 Euclidean Geometry (3)
Development of Euclidean Geometry. Topics include basic concepts of logic, axiomatic proofs, inductive reasoning, analytic geometry, applications of technology, and van Hiele levels of learning. Intended for students seeking elementary teacher licensure. Prerequisites: MATH 301, and MATH 151 or MATH 146.

MATH 310 Number Theory (3)
Classical number theory including the fundamental theorem of arithmetic, congruences, and linear diophantine equations. Prerequisite: MATH 240.

MATH 325 Linear Algebra (3)
Matrices, solving systems of equations, determinants, vectors, vector spaces, linear transformations and eigenvalues. Prerequisites: MATH 225 and MATH 240.

MATH 340 Ethnomathematics (3)
Study of mathematics within cultures, especially small-scale indigenous cultures. Through the lens of culture, students can compare/contrast mathematics systems, their logical structures, and their modes of expression. Prerequisite: MATH 240 or MATH 301 or permission of instructor.

MATH 352 Advanced Calculus (3)
A rigorous and thorough treatment of differential and integral Calculus of one real variable. Topics include construction of the real numbers, limits, continuity, derivatives, integration, and series. Prerequisite: MATH 240.

MATH 360 Methods of Applied Mathematics (3)
Selection of techniques in applied mathematics of particular use to scientists and engineers. Topics include vector analysis, partial differential equations and transform techniques. Applications are stressed. Prerequisite: MATH 253, and MATH 236 or MATH 260.

MATH 361 Numerical Analysis (4)
Elementary numerical analysis using the hand-held programmable calculator including Taylor's theorem, truncating errors, iteration processes, least squares methods, numerical solution of algebraic and transcendental equations, systems of equations, ordinary and partial differential equations, integral equations, interpolation, finite differences, eigenvalue problems, relaxation techniques, approximations, and error analysis. Prerequisite: MATH 152 or MATH 136.

MATH 362 Fourier Analysis (3)
Introduction to continuous and discrete Fourier analysis. Topics include signals as vectors, matrices, and functions; orthogonality and correlation; expansions and transforms; Fourier series and frequency analysis; filtering, thresholding and compression; analysis of accuracy, including aliasing and convergence; Fourier and inverse Fourier transforms; discrete and inverse discrete Fourier transforms. Prerequisite: MATH 152 or MATH 136.

MATH 365 Mathematical Modeling (3)
A bridge between calculus and the application of mathematics. Investigation of meaningful and practical problems chosen from experiences, encompassing the disciplines of mathematical sciences, operations research, engineering, management sciences and life sciences. Prerequisites: STAT 200, MATH 152 or MATH 136, and one of the following: MATH 236, 240, 253, 260, 325, or consent of instructor.

MATH 366 Methods of Applied Mathematics II (3)
Treatment of numerical methods used to solve problems in applied mathematics. Topics include iteration, interpolation, numerical integration and differentiation, numerical linear algebra, numerical solutions of matrix eigenvalue problems, and numerical solutions of ordinary and partial differential equations. Prerequisites: MATH 360; and CSCI 110/110L or CSCI 111 or CSCI 130 or CSCI 310.

MATH 369 Discrete Structures I (3)
Elementary logic, induction, recursion, recurrence relations, sets, combinatorics, relations, functions, graphs, trees, and elementary abstract structures. Prerequisites: MATH 152 or MATH 136, and CSCI 111.

MATH 370 Discrete Structures II (3)
Applications of logic, Boolean algebra and computer logic, abstract structures, coding theory, finite-state machines, and computability. Prerequisites: MATH 369 or both MATH 240 and CSCI 111.

MATH 380 History of Mathematics (3)
History of mathematics from antiquity to the present with emphasis upon the development of mathematics concepts and the people involved. Prerequisite: MATH 152.

MATH 386 Geometries (4)
A study of Euclidean and non-Euclidean geometries. This course examines the differences in their axiom systems and their models, and how notions in Euclidean geometry are interpreted in non-Euclidean systems. Prerequisite: MATH 240.

MATH 389 Explorations in Mathematics for Elementary Educators (1)
Broadening of future elementary educators' exposure to, and understanding of, diverse fields of mathematics through directed readings, analysis, and discussion. Prerequisites: MATH 301 and consent of instructor.

MATH 394 Mathematics Colloquium (1)
A weekly series of talks on a wide range of contemporary mathematics will be given by local faculty and others. Students must provide written commentary on these talks. Prerequisite: Permission to enroll is required.

MATH 395 Independent Study (1-3)

MATH 396 Topics (1-3)

MATH 397 Structured Research (1-4)
Mathematical research under the direct guidance of a faculty member. Designed for junior and senior level students. May be repeated for up to 12 credit hours. Prerequisite: Permission of instructor.

MATH 415 Abstract Algebra for Secondary Education (3)
In-depth study of the algebra underlying the secondary school mathematics. Particular focus on: elementary number theory, modular arithmetic, integral domains, theory of polynomials, fields, and groups. Prerequisites: MATH 240 and one of the following: MATH 310, MATH 325, or MATH 352.

MATH 420 Introduction to Topology (3)
Important as preparation for graduate work in many areas of mathematics and theoretical physics. Introduction to general topology, topics normally covered include: metric spaces, connectedness, compactness, the separation axioms and the Tychonoff theorem. Intended for mathematically mature students. Prerequisite: MATH 325 or consent of instructor.

MATH 425 Computational Abstract Algebra (3)
Introduction to abstract algebra, typically groups and rings, from a computational perspective. Computation will be used to help explore and verify the properties of some algebraic structures. Prerequisites: MATH 253, MATH 225 or 325.

MATH 430 Mathematical Logic (3)
Introduction to the classical areas of mathematical logic (model theory, proof theory, the theory of computation, complexity theory and set theory), the relationships these sub-disciplines have with each other and their relationships to the foundations of mathematics, computational science, computer science and the philosophy of mathematics. Prerequisite: MATH 240 or 369.

MATH 450 Complex Variables (3)
Algebra of complex numbers, analyticity, differentiation and integration of complex functions, Cauchy's integral formulae, and series. Prerequisite: MATH 240.

MATH 452 Intro to Real Analysis I (3)
An in-depth and rigorous treatment of the theory of calculus, with an introduction to real analysis. Topics for MATH 452 and MATH 453 include number systems, cardinality, point set topology; open and closed sets, metric spaces, completeness, compactness and connected sets; sequences, series, limits, continuity, differentiation, integration, sequences and series of functions, and Euclidean spaces. Prerequisites: MATH 240, 253, and a grade of C or better in one of the following: MATH 310, MATH 325, or MATH 352.

MATH 453 Intro to Real Analysis II (3)
A continuation of MATH 452. Topics include number systems, cardinality, point set topology; open and closed sets, metric spaces, completeness, compactness and connected sets; sequences, series, limits, continuity, differentiation, integration; sequences and series of functions, and Euclidean spaces. Prerequisite: MATH 452.

MATH 460 Advanced Linear Algebra (3)
Characteristics and minimal polynomial, Cayley-Hamilton Theorem, invariant subspaces, bilinear forms, primary decomposition theorem, dual vector spaces. Prerequisite: MATH 325.

MATH 466 Methods of Applied Mathematics III (3)
Exploration of advanced methods of applied mathematics with an emphasis on extending basic methods and concepts. Specific content may vary but will typically include contemporary techniques in applied mathematics, modeling and data analysis. Prerequisite: MATH 366.

MATH 484 Senior Seminar I (2)
An introduction to conducting mathematical research with discussion of various research topics, including how to read and analyze articles in mathematics. Presentations and papers will be required. Prerequisite: MATH 452 or MATH 490 or MATH 366 or STAT 350.

MATH 490 Abstract Algebra I (3)
An introduction to the theory of algebraic structures. Topics include groups, subgroups, cyclic groups, groups of permutations, homomorphisms, isomorphisms, the order of group elements, cosets, quotient structures, isomorphism theorems and an introduction to rings and fields. Prerequisite: MATH 240, and a grade of C or better in one of the following: MATH 310, MATH 325, or MATH 352.

MATH 491 Abstract Algebra II (3)
A continuation of MATH 490 Abstract Algebra I. Topics include properties of rings, subrings, ideals, quotient structures; ring homomorphisms and isomorphisms, integral domains, polynomial rings, properties of fields, subfields, field extensions, finite fields and Galois Theory. Prerequisites: MATH 490.

MATH 494 Senior Seminar II (2)
Capstone course, with discussion of specialized topics and analysis of mathematical results, requiring students to interpret and present research. Subject matter will vary. Presentations and/or written research papers will be required. Prerequisite: Consent of instructor.

MATH 495 Independent Study (1-3)

MATH 496 Topics (1-3)

MATH 500 Introduction to Graduate Studies in Applied Mathematics (3)
Introduction to methods and concepts of applied mathematics, including

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differentiation and integration of single and multivariate functions, vector calculus methods, matrix-vector computations, vector space concepts, and mathematical proofs. Prerequisite: Acceptance into the Graduate Certificate in Applied Mathematics program.

MATH 510 Applied Probability and Statistics (3)
Develop a comprehension of, and an ability to perform, statistical methods that are most common in educational research. Emphases on statistical concepts that will further prepare teachers to teach introductory-level college statistics and critically examine and comprehend the data analysis in educational literature. Graphing calculators and computer software may be used to analyze and display data. Prerequisite: Acceptance into the Graduate Certificate in Applied Mathematics program.

MATH 520 Applied Numerical Methods (3)
Exploration of fundamental algorithms and analysis of numerical methods commonly used by scientists, engineers, and mathematicians to approximately solve mathematical problems that are analytically impossible or intractable. Prerequisite: MATH 500.

MATH 530 Applied Mathematical Modeling (3)
Investigation of applications of mathematics in the natural and social sciences, involving continuous, discrete, and probabilistic models. Survey of historical applications of mathematics in fields including chemistry, engineering, finance, ecology, and management; and creation of new models to address current questions in these fields. Involves model creation and model selection, analytical and computational methods of solving a model, and presentation of original work in a seminar setting. Prerequisite: MATH 500.

MATH 540 Applied Audio and Image Processing (3)
Investigation of the mathematics behind the processing of sound waves and digital images. Both theory and computer-based applications will be explored, using methods of calculus, matrix-vector algebra, and inner product spaces. Prerequisite: MATH 500.

MATH 550 Mathematical Logic and Foundations in Mathematics (3)
Study of logical systems, formal languages, satisfaction, deduction, correctness, completeness, applications to algebraic structures and orderings, construction of ordinal and cardinal numbers within axiomatic set theory, models of computation, undecidability, computational complexity, intractability, and introduction to themes within the philosophy of mathematics. Prerequisite: Acceptance into the Graduate Certificate in Applied Mathematics program.

MATH 560 Applied Number Theory (3)
Applied treatment of number theory including prime numbers, congruences, quadratic residues and primitive roots. Prerequisite: Acceptance into the Graduate Certificate in Applied Mathematics program.

MATH 570 Applied Cryptography (3)
Exploration of cryptography. Topics include number theory, classical ciphers, integer factorization, primality testing, public-key ciphers, digital signatures schemes, commitment schemes, elliptic curve methods, and applications to e-commerce. Additional topics upon student interest. Prerequisite: MATH 560.

MATH 596 Topics (1-3)

MEDICAL LAB TECHNICIAN (MLTP)

MLTP 101 Phlebotomy (3)
Orientation to the clinical lab areas and workflow. Emphasis on venipuncture and dermal collections. Skills necessary for limiting pre-analytic errors with sample collections and processing. Knowledge of POC testing, patient collection instructions, send out testing and informatics. Review of regulatory, ethical and legal issues, healthcare delivery system, certification and licensure, organ systems, basic medical terminology, infection prevention, and professionalism. Corequisite: MLTP 102.

MLTP 102 Applied Phlebotomy (2)
Clinical laboratory experience at an affiliated site. Application of knowledge and skills to venipuncture and dermal collections, sample processing, POC testing, patient collection instructions, send-out testing, informatics, OSHA practices and phlebotomist professionalism are included. Corequisite: MLTP 101.

MLTP 132 Clinical Hematology and Coagulation (3)
MLTP 132L Clinical Hematology and Coagulation Lab (1)
Introduction to the theory and practical application of hematology and hemostasis systems as it relates to the medical laboratory. Bone marrow, blood cell formation, hemoglobin structure and synthesis, cell function and morphology, and coagulation are explored. Correlation of test results with normal results, blood cell disorders and clotting abnormalities emphasized. Laboratory techniques, instrumentation, and quality assurance in the hematology/hemostasis lab. Prerequisites: BIOL 209/209L, BIOL 210/210L, CHEM 121/121L or CHEM 131/131L, MLTP 101, and MLTP 102. Corequisites: MLTP 141/141L, MLTP 232, MLTP 242/242L, and MLTP 275.

MLTP 138 Clinical Immunology (2)
MLTP 138L Clinical Immunology Lab (1)
Fundamentals and procedures of the immune defenses as it relates to medical laboratory testing; innate and adaptive immune responses, deficiencies, autoimmunity, hypersensitivity and tissue transplantation. Exploration of serologic techniques and instrumentation in the detection and diagnoses of viral illness, immune related diseases and its applications in immunohematology. Introduction to theories and principles of molecular testing methds. Prerequisites: BIOL 209/209L, BIOL 210/210L, CHEM 121/121L or CHEM

131/131L, MLTP 101, and MLTP 102. Corequisites: MLTP 142/142L, and MLTP 231/231L.

MLTP 141 Clinical Immunohematology (2)
MLTP 141L Clinical Immunohematology Lab (1)
Theoretical principles and procedures in immunohematology and application in the medical laboratory. Blood banking procedures and potential problems in blood bank testing relative to antibody identification, compatibility testing, transfusion reactions and maternal/neonatal screening for hemolytic disease of the newborn. Prerequisites: BIOL 209/209L, BIOL 210/210L, CHEM 121/121L or CHEM 131/131L, MLTP 101, MLTP 102, MLTP 138/138L, MLTP 142/142L, and MLTP 231/231L. Corequisites: MLTP 132/132L, MLTP 232, MLTP 242/242L, and MLTP 275.

MLTP 142 Clinical Microscopy (2)
MLTP 142L Clinical Microscopy Lab (1)
Introduction to microscopy in the medical laboratory. Emphasis on kidney function and urine formation: examination of the physical, chemical and microscopic components of urine. Body fluid analysis of feces, seminal, vaginal, amniotic, cerebrospinal, serous, and synovial fluids. Critical analysis and problem solving with regards to pre-analytic, analytic and post-analytic variables in sample testing. Prerequisites: BIOL 209/209L, BIOL 210/210L, CHEM 121/121L or CHEM 131/131L, MLTP 101, and MLTP 102. Corequisites: MLTP 138/138L, and MLTP 231/231L.

MLTP 180 Applied Immunohematology (3)
Clinical laboratory experience in the principles and procedures of immunohematology at an affiliated site. It is an online supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA practices and medical laboratory technician professionalism are included. Prerequisites: MLTP 132/132L, MLTP 141/141L, MLTP 232, MLTP 242/242L, and MLTP 275, Corequisites: MLTP 182, MLTP 250, MLTP 252, and MLTP 253.

MLTP 182 Applied Hematology and Body Fluids (4)
Clinical laboratory experience in the principles and procedures of hematology, hemostasis, urinalysis and body fluids at an affiliated site. It is an on-line supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA practices and medical laboratory technician professionalism are included. Prerequisites: MLTP 132/132L, MLTP 141/141L, MLTP 232, MLTP 242/242L, and MLTP 275. Corequisites: MLTP 180, MLTP 250, MLTP 252, and MLTP 253.

MLTP 195 Independent Study (1-3)

MLTP 231 Clinical Microbiology I (3)
MLTP 231L Clinical Microbiology I Lab (1)
Study of normal flora and pathogenic microorganisms. Methods for recovery, identification of pathogens, culture techniques, procedures, antibiotic testing, automation and interpretation of clinical data. Emphasis on clinical specimens, testing algorithms and data correlation including diagnostics, public health, safety and quality control. Prerequisites: BIOL 209/209L, BIOL 210/210L, CHEM 121/121L or CHEM 131/131L, MLTP 101, and MLTP 102. Corequisites: MLTP 138/138L, and MLTP 142/142L.

MLTP 232 Clinical Microbiology II (3)
Introduction to basic identification and classification of medically significant mycobacteria and other bacteria with unusual growth requirements, fungi, parasites and viruses. Sample collection, processing, isolation methods, and immunologic diagnosis and treatment. Epidemiology and pathogenesis of associated diseases are explored. Prerequisites: MLTP 142/142L, and MLTP 231/231L. Corequisites: MLTP 132/132L, MLTP 141/141L, MLTP 242/242L, and MLTP 275.

MLTP 242 Clinical Chemistry (3)
MLTP 242L Clinical Chemistry Lab (1)
Application of human pathophysiology and how it relates to laboratory testing. Cardiovascular disease, kidney function, acid-base metabolism, liver, bone, carbohydrate disorders, endocrine, malignancy, and exogenous substances. Exploration of measurement methodologies: instrumentation, reagents and reactions, standards and control usage in quality assurance. Critical analysis and problem solving with regards to pre-analytic, analytic and post-analytic variables in sample testing. Prerequisites: BIOL 209/209L, BIOL 210/210L, CHEM 121/121L or CHEM 131/131L, MLTP 101, MLTP 102, MLTP 138/138L, MLTP 142/142L, and MLTP 231/231L. Corequisites: MLTP 132/132L, MLTP 141/141L, MLTP 232, and MLTP 275.

MLTP 250 Applied Chemistry and Serology (2)
Clinical laboratory experience in the principles and procedures of chemistry and serology at an affiliated site. It is an on-line supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA practices and medical laboratory technician professionalism are included. Prerequisites: MLTP 132/132L, MLTP 141/141L, MLTP 232, MLTP 242/242L, and MLTP 275. Corequisites: MLTP 180, MLTP 182, MLTP 252, MLTP 253.

MLTP 252 Applied Microbiology (4)
Clinical laboratory experience in the principles and procedures of clinical microbiology at an affiliated site. It is an on-line supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA

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practices and medical laboratory technician professionalism are included. Prerequisites: MLTP 132/132L, MLTP 141/141L, MLTP 232, MLTP 242/242L, and MLTP 275. Corequisites: MLTP 180, MLTP 182, MLTP 250, and MLTP 253.

MLTP 253 Certification Exam Review (1)
Review of key principles and content in preparation for national certification examination. Prerequisites: MLTP 132/132L, MLTP 141/141L, MLTP 232, MLTP 242/242L, and MLTP 275. Corequisites: MLTP 180, MLTP 182, MLTP 250, MLTP 252.

MLTP 275 Capstone Seminar (1)
Preparation for clinical internships. Conflict resolution, communication skills, professional behavior in the workplace, resume writing and interview skills. Prerequisites: BIOL 209/209L, BIOL 210/210L, CHEM 121/121L or CHEM 131/131L, MLTP 101, MLTP 102, MLTP 138/138L, MLTP 142/142L, and MLTP 231/231L. Corequisites: MLTP 132/132L, MLTP 141/141L, MLTP 232, and MLTP 242/242L.

MEDICAL OFFICE ASSISTANT (MOAP)

MOAP 110 Medical Office Administration (4)
Learn to perform the administrative duties specifically used in medical offices.

MOAP 111 Introduction to Medical Assisting (3)
Description and career opportunities. Professionalism and effective communication. Overview of health care, types of organizations and health care team. Legal considerations in the medical office, patient rights and the Health Information Portability and Accountability Act (HIPAA), and principles of law and ethics in health care.

MOAP 130 Medical Office Administration Insurance Billing and Coding (3)
Introduction to outpatient coding with topics including identifying medical procedures and services performed (CPT codes), correlating the diagnosis, symptom, complaint or condition (ICD-9 codes), and establishing the medical necessity required for third-party reimbursement.

MOAP 133 Basic Medical Sciences I (4)
Organization and function of the human body. Introductory anatomy, physiology, and pathophysiology of integumentary, musculoskeletal, cardiovascular, blood, lymphatic and immune, and respiratory. Health problems, illnesses, diagnostic tests, drug therapy and treatment common in the ambulatory patient care setting.

MOAP 135 Basic Medical Sciences II (4)
Organization and function of urinary, male and female reproductive systems, musculoskeletal, and eyes, ears, nose and throat. Implications in pediatrics, geriatrics and nutrition are reviewed. Health problems, illnesses, diagnostic tests, drug therapy and treatment common in the ambulatory patient care setting.

MOAP 136 Introduction to Clinical Skills (2)
Principles and procedures. Collection of patient history and data, vital signs, height, weight, and appropriate documentation. Methods of assisting clinicians with physical examinations, procedures, and treatments in the medical office. Infection control and medical asepsis. Prerequisite: MOAP 111.

MOAP 138 Medical Assisting Laboratory Skills (4)
Laboratory skills and techniques for collection, handling, examination and testing of laboratory specimens often encountered in the ambulatory care setting. Emphasizes hands-on experience. Prerequisites: MOAP 111 and MOAP 136.

MOAP 140 Medical Assisting Clinical Skills (4)
Principles and procedures. Methods of assisting clinicians with specialty physical examinations, diagnostic testing, procedures, treatments, and minor surgical procedures in the medical office. Principles of medication administration with an emphasis on oral and parenteral routes of drug administration. Prerequisites: MOAP 111 and MOAP 136.

MOAP 150 Pharmacology for Medical Assistants (3)
Overview of pharmacology. Drug action and uses, names, classifications, effects, interactions, regulation and safety. Vaccine and immunization schedules and administration. Information regarding the measurement of medications, dosage calculations, routes of administration, and commonly prescribed drugs in the medical office is provided. Prerequisite: MOAP 111.

MOAP 183 Medical Assistant Internship (5)
Supervised placement in contracted facility for guided experience in application of knowledge and skill acquired in the classroom. Business and clinical procedures. Positions are non-paid due to accreditation requirements. Permission of program coordinator required to begin internship.

MOAP 189 Review for Medical Assistant National Exam (1)
Preparation and practice for a national registration examination. Prerequisite: Program Director permission.

MOAP 196 Topics: (1-3)

MULTIMEDIA ANIMATION (MGDA)

MGDA 105 Creative Development (3)
Hands-on strategies for developing, stimulating, and maintaining creativity to accomplish professional and personal goals.

MGDA 120 Digital Design Tools (3)
Concentrates on the capabiliti9es of digital cameras, raster photo-editing software, vector drawing software, and digital painting software for use in 3D animation. Explores how these image tools, combinted with basic techniques, can be applied to create digital images, graphics, and videos.

MGDA 149 Digital Drawing (3)
Explore foundational skills necessary to create characters for use in computer-based 3D animation courses. Learn to draw human and non-human forms first using pencil and paper, then apply those skills with computer graphic design software. Character development, anatomy, dynamic movement and action, and scenery emphasized.

MGDA 150 Previsualization (3)
Introduces steps followed by professional media content producers and 3D animators/VR designers for producing preproduction material in a digital environment. Previsualization techniques include scriptwriting for 3D and VR experiences; plus traditional storyboarding, and virtual reality camera/actor layout blocking methods.

MGDA 153 Beginning 3D Animation (3)
Encompasses all major aspects of creating 3D characters using animation software. Use of developed characters to learn how to animate for personality.

MGDA 163 Audio Design (3)
Explores how audio recording principles enhance multimedia and 3D animated productions.

MGDA 164 Digital Video Editing (3)
Introduction to digital non-linear video editing as a 3D Animation tool. Edit, manipulate and compress/export video. Assembly techniques including media management, editing tools, titles, and motion control; transitions and filters, and special effects are explored

MGDA 196 Topics: (1-3)

MGDA 225 3D Character Design (3)
Explores advanced aspects of creating 3D characters on the computer, with an emphasis on digital sculpture techniques. Also examine facial animation, lip synchronization, scene design and lighting setups.

MGDA 229 Animation History (3)
Overview of the advent and evolution of animation from its earliest origins through the 1990s. Examine important individuals and studios in the animation field. View, analyze and peer critique animation examples. Social, cultural, artistic movements, and influences on contemporary animation styles and animation techniques are analyzed.

MGDA 250 3D Character Rigging (3)
Explore advanced character rigging features for 3D models. Understand adding controls to work with joints, forward kinematic (FK) and inverse kinematic (IK) blending, facial control using phonemes, eye movement, muscle systems, and skinning.

MGDA 265 Digital Compositing (3)
Provides fundamental techniques for creating motion graphics, green screen composites, advanced motional tracking data, modifying 3D animation multipass renders, and integration with 3D software.

MGDA 268 Freelancing for Creatives (3)
Introduction to freelancing opportunities for people in creative fields. Provides an overview about getting started, networking, financing, law, insurance, intellectual property rights, government regulations, time management, record keeping, taxes, self-promotion, and work-life balance.

MGDA 270 Advanced 3D Animation (3)
Investigate advanced 3D animation concepts that include workflow, advanced scene design, lighting, cameras, keyframing, textures, and rendering.

MGDA 285 3D Animation Capstone (3)
Develop and produce a short-form 3D animated movie using a production workflow and producing techniques. Explore the production process from conceptualization through finalization.

MGDA 296 Topics (1-3)

MUSIC: ACADEMIC (MUSA)

MUSA 101 Concert Attendance (0)
Required attendance at concerts to gain an appreciation for music and music performance. Majors must meet attendance requirements at approved music concerts and Recital Hour for eight semesters as a graduation requirement.

MUSA 111 Music Technology (1)
Introduction to computer applications in music. The course begins with a focus on basic computer operation and the installation of the various software programs that will be used in the course. The course will include an overview of the three basic music applications for computers: notation software, Computer Assisted Instruction (CAI) software, and sequencing software (including digital audio). Corequisite: MUSA 114.

MUSA 113 Fundamentals of Theory (3)
Required theory course for music minor and music theatre students. Harmonic principles of music, including scales, intervals, triads, and chords. Concurrent enrollment in MUSA 130 or prior knowledge of the keyboard required.

MUSA 114 Theory I-Introduction (3)
Harmonic principles of the "common-practice" period including scales, intervals, triads and 7th chords. Introduction to part writing and voice leading. Prerequisite: satisfactory score on theory placement examination; concurrent enrollment in MUSA 116; concurrent enrollment in MUSA 130 or prior knowledge of the keyboard.

MUSA 115 Theory II-Diatonic Concepts (3)
Continuation of MUSA 114, extending to all types of diatonic 7th chords, and their usages. Includes advanced rules of tonal harmonization. Prerequisite: MUSA 114 or consent of instructor; concurrent enrollment in MUSA 117. Concurrent enrollment in MUSA 131 or prior knowledge of the keyboard is required.

MUSA 116 Ear Training and Sightsinging I (2)
Skills developed in reading rhythms, sightsinging, and listening. Emphasis on beginning melodic, harmonic, and rhythmic dictation. To be taken concurrently with MUSA 114.

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MUSA 117 Ear Training and Sightsinging II (2)
Further development of skills in sightsinging, rhythmic recognition, advanced listening abilities, including dictation of melodic and harmonic intervals, chord progressions, and two, three, and four-part chorales. To be taken concurrently with MUSA 115. Prerequisite: MUSA 116.

MUSA 120 Class Piano for Non Majors (2)
MUSA 121 Class Piano for Non Majors (2)
Open to all students (no prerequisites or corequisites), but recommended specifically for students who have little or no training in piano and are not music (or music theatre) majors or minors. Introductory piano proficiency (rudimentary note reading, music vocabulary, technique, aural skills, theory, and creative application of musical skills).

MUSA 128 Workshop In Music (1-3)
Consists of specialized workshops in various aspects of music made possible by visiting artists and/or lecturers.

MUSA 130 Class Piano I (2)
Introduction of basic keyboard skills including scales, chords, transposition, harmonization, choir warmups, improvisation, and sightreading. Recommended for music majors, music minors and music theatre majors needing piano proficiency skills required by their program of study. Students move at their own pace completing specified sequenced skills.

MUSA 131 Class Piano II (2)
Continuation of keyboard skills learned in MUSA 130 including experience with arpeggios, chord inversions, different accompaniment styles and ensemble experiences. Students move at their own pace completing specified sequence skills. Prerequisites: MUSA 130 or consent of instructor.

MUSA 137 Class Voice (1)
Fundamentals of singing, interpretation, phonetics, language (diction for singers), and solo repertoire for beginning voice students.

MUSA 214 Theory III - Chromatic Concepts (3)
The full use of chromaticism through secondary dominants, altered chords, Neapolitan and augmented sixth chords, and modulation techniques. Continues into 20th Century including the use of advanced chromaticism, serialism, and atonality. Includes advanced development of ear training and sightsinging. Emphasis on harmonic and rhythmic dictation. Continuation of MUSA 115 and 117. Prerequisites: MUSA 115 and 117.

MUSA 215 Theory IV - Twentieth Century Form and Analysis (3)
Study of various compositional approaches and techniques of the 20th Century, correlated with the study of musical form. Includes advanced development of ear training and sight singing. Emphasis on harmonic and rhythmic dictation. Continuation of MUSA 214. Prerequisite: MUSA 214.

✓ **MUSA 220 Music Appreciation-GTAH1 (3)**
Masterpieces of music, composers, and performers useful for the music student who has a weak background in the Masters.

MUSA 228 Workshop In Music (1-3)
Consists of specialized workshops in various aspects of music made possible by visiting artists and/or lecturers.

MUSA 230 Class Piano III (2)
Continuation of concepts covered in MUSA 130 and 131 including minor scales, chords, transposition, playing from lead sheets, improvisation, basic jazz keyboarding skills, sightreading. Prerequisites: MUSA 130 and MUSA 131, or consent of instructor.

MUSA 231 Class Piano IV (2)
Culmination of concepts covered in MUSA 130, 131, and 230. Emphasis on jazz keyboarding skills, reading from open vocal score or instrumental score with transposing parts, creating and playing accompaniments for simple pieces. Prerequisite: MUSA 230 or consent of instructor.

MUSA 232 String Instrument Techniques and Materials (2)
Study of violin, viola, cello, and string bass in a class situation. Emphasis is on fundamentals of playing techniques at an elementary level.

MUSA 233 Woodwind Pedagogy and Materials (2)
Study of flute, oboe, clarinet, bassoon, and saxophone in a class situation. Emphasis is on fundamentals of playing techniques at an elementary level.

MUSA 234 Brass Instrument Techniques and Materials (2)
A concentrated course to develop a knowledge of the brass instruments and to acquire sufficient skill to demonstrate good tone, technique, and breath control.

MUSA 235 Percussion Pedagogy and Materials (2)
The study of methods and materials for teaching beginning percussion in the public school. Includes practical instruction on the instruments utilized in the marching band, orchestra, and stage band.

MUSA 240 Introduction to Music Education (2)
Includes historical survey of the profession. Observation of effective music teachers to determine successful classroom management systems and methods of instruction. 20 field experience hours integrated as a lab. Development of personal philosophies of music education following a study of philosophical trends in music education. Prerequisites: MUSA 115, 117.

MUSA 250 Beginning Conducting (2)
Basic concepts and techniques necessary to conduct music. Students will be expected to master patterns, fermatas, dynamics, etc. Observation of other conductors and score study is included. Required of all music majors. Prerequisites: MUSA 214, 217. Corequisite: MUSA 215.

✓ **MUSA 266 History of Popular Music-GTAH1 (3)**
Differences in style, musical elements, lyrical content, and outstanding artists/writers in the areas of popular, rock, Country Western, and jazz idioms. Evolutionary aspects and social significance are introduced as background references. Guest lectures, class listening sessions, film strips, and music video augment the lecture sessions. Open to all students.

MUSA 267 Jazz History and Literature (3)
Survey of prominent artists, innovators, and stylistic trends in jazz from its origins to the contemporary.

MUSA 268 Beginning Jazz Improvisation (1)
Materials and techniques for improvisation, including chord and scale construction, modality, harmonic patterns, linear concepts, with emphasis on technique, style and idiomatic usage. Prerequisites: MUSA 115 or consent of instructor. Corequisites: MUSA 214 or consent of instructor.

MUSA 296 Topics (1-3)

MUSA 302 Keyboard Literature I (3)
Survey of keyboard literature from Elizabethan music through Mendelssohn. Prerequisites: MUSA 230 or consent of instructor, MUSL 230.

MUSA 303 Symphonic Literature (3)
Survey of music from early instrumental to present-day compositions. Emphasis on composers' styles, orchestras, conductors; chamber orchestra music also included. Prerequisites: MUSA 215.

MUSA 304 Keyboard Literature II (3)
Survey of keyboard literature from Chopin to the present day. Prerequisites: MUSA 231, MUSL 230, or consent of instructor.

MUSA 310 Accompanying Techniques (2)
Development of accompanying proficiency, including listening skills, form, and analysis of the music to be performed; rehearsing techniques; accompanying repertoire for vocal; instrumental; and ensemble playing. Prerequisite: MUSA 214, or consent of instructor.

MUSA 311 Advanced Music Technology (1)
Application of advanced technological tools in music recording, editing, composition, and production, including audio components and connections; digital audio multi-track recording, synthesis, sequencing, sampling, and editing; and microphone techniques. Prerequisite: MUSA 111.

MUSA 317 Orchestration (2)
Choral and instrumental arranging; instrumentation, scoring, and analysis of harmonic styles of various composers. Students are required to compose and arrange original works. Prerequisite: MUSA 215.

MUSA 318 Vocal Literature (3)
Follows the changing patterns, styles, and fashions of the secular art-song from medieval Europe to Europe and America of the day. Prerequisites: MUSA 137 or previous enrollment in private vocal studies.

MUSA 319 Choral Literature (3)
Historical, analytical, and interpretive study of choral literature spanning the Renaissance through the 20th Century. Important course for those planning to direct choirs. Prerequisite: previous or concurrent enrollment in a Colorado Mesa University choir or consent of the instructor.

MUSA 326 Music History and Literature I (3)
Literature and styles of the master composers of music through the Ancient, Medieval, Renaissance, and Baroque periods. Course work is designed for the music major, utilizing a lecture and listening laboratory format and one scholarly research paper of the student's choice. Prerequisite: MUSA 114.

MUSA 327 Music History and Literature II (3)
Literature and styles of the master composers of music through the classic, romantic, and modern ages. Coursework is designed primarily for the music major, utilizing a lecture and listening laboratory format and one scholarly research paper of the student's choice. Prerequisite: MUSA 114.

MUSA 328 Workshop In Music (1-3)
Consists of specialized workshops in various aspects of music made possible by visiting artists and/or lecturers.

MUSA 337 Diction For Singers (2)
Pronunciation of Italian, German, and French as applied to the performance of vocal literature.

MUSA 340 Teaching Elementary and General Music: Methods, Principles, and Materials (3)
For Music Education Majors: The course is designed for standards-based curriculum for elementary and general music classes. Weekly laboratory experiences focus on course content dealing with teaching competencies in elementary and general music. Also addresses how to teach literacy in the music classroom. Includes 30 hours of field experience. Prerequisites: MUSA 215, 218, 240, 250.

MUSA 350A Advanced Conducting: Choral (2)
More difficult techniques such as advanced meters, advanced score study, interpretive conducting and ensemble rehearsal techniques. Required of all music education majors. Prerequisites: MUSA 250.

MUSA 350B Advanced Conducting: Instrumental (2)
More difficult techniques such as advanced meters, advanced score study, interpretive conducting and ensemble rehearsal techniques. Required of all music education majors. Prerequisites: MUSA 250.

MUSA 363 Music Industry and Marketing (3)
Exploration of business aspects of the music industry, with an emphasis on careers and music marketing.

MUSA 365 Entrepreneurship for Creatives (3)
Preparation for aspiring musical creatives to build a career through entrepreneurial activities including business model

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development, project management strategy development, budgeting, and promotion, leading to a startup endeavor in the creative sector.

MUSA 368 Advanced Jazz Improvisation (2)
Advanced Improvisation is the continuation of Beginning Improvisation. Advanced theoretical concepts will be addressed with expansion of repertoire and improvisational patterns. Prerequisites: MUSA 268, MUSA 215, Class Piano IV/piano proficiency, or permission of instructor.

MUSA 395 Independent Study (1-3)

MUSA 396 Topics (1-3)

MUSA 410 Vocal Pedagogy (3)
The physiology of the human vocal mechanism, various teaching styles, vocal problems related to various age groups, and vocal repertoire pertinent to all age groups and levels of development. Prerequisites: MUSA 137 or previous or concurrent enrollment in private vocal studies.

MUSA 411 Piano Pedagogy (3)
Introduction to the field of piano teaching and learning/teaching theories with application to piano teaching. Survey of methods and literature. Instructional techniques for group and individual lesson settings. Prerequisites: MUSA 231, MUSL 230 or consent of instructor.

MUSA 426 The Music of World Cultures (2)
An exploration of music outside the Western Classical music tradition. Musical traditions include music of the Orient, Africa, India, and North and South American ethnic music. The course will also examine ethnic music from other world cultures such as Afro Cuban and Brazilian as well as blues and jazz music developed in the United States. Prerequisite: MUSA 215, MUSA 231 or piano proficiency, or permission of the instructor.

MUSA 428 Workshop In Music (1-3)
Consists of specialized workshops in various aspects of music made possible by visiting artists and/or lecturers.

MUSA 437 Advanced Singer's Diction - Romance Languages (1)
Advanced instruction in lyric diction for Romance languages including Latin, Italian, French, and Spanish. Prerequisites: MUSA 337 and completion of sophomore review.

MUSA 438 Advanced Singer's Diction - German and Russian (1)
Advanced instruction in lyric diction for German and Russian. Prerequisites: MUSA 337 and completion of sophomore review.

MUSA 440 Teaching Vocal Music K-12: Methods, Principles, and Materials (3)
Standards-based instruction of elementary and general music classes for Music Education majors. Training in concepts, methodology, and materials necessary to teach standards-based vocal music in public/private schools. Includes 30 hours of field experience. Prerequisites: MUSA 137, MUSL 137, or MUSP 150, MUSA 350A or 350B.

MUSA 441 Teaching Instrumental Music K-12: Methods, Principles and Materials (3)
Designed for standards-based music curriculum for teaching instrumental music in the public schools. Activity will be centered on developing teaching competencies, administration of the music program, and methods, materials, equipment and technology needed for the instrumental music program. Includes 30 hours field experience. Prerequisites: MUSA 350A or 350B.

MUSA 442A Teaching Special Ensembles: Choral (2)
Practical knowledge and methodology in the teaching of (A) Show/Jazz Choirs and (B) Marching/Jazz Bands. Students will learn the skills necessary to direct these ensembles. Includes 30 hours of field experience. Prerequisites: MUSA 215, 240 and 250. Corequisites: MUSA 350A or 350B if not completed.

MUSA 442B Teaching Special Ensembles: Instrumental (2)
Practical knowledge and methodology in the teaching of (A) Show/Jazz Choirs and (B) Marching/Jazz Bands. Students will learn the skills necessary to direct these ensembles. Includes 30 hours of field experience. Prerequisites: MUSA 215, 240 and 250. Corequisites: MUSA 350A or 350B if not completed.

MUSA 495 Independent Study (1-3)

MUSA 496 Topics (1-3)

MUSA 499 Internship (1-4)
Work experience obtained on a job in the music industry. Prerequisites: Senior status, MUSA 363, and consent of instructor.

MUSA 596 Topics: (1-3)

MUSIC/LESSONS (MUSL)

Development of individual music performance skills through weekly lessons. Available to all students and may be used as an elective choice to students concurrently enrolled in a MUSP course. Lessons may be taken twice at each level. Music majors are required to attend and perform at weekly recitals as a component of applied music lessons. An instructional fee is required.

MUSL 130, 230, 330, 430 Piano (1-2)

MUSL 131, 231, 331, 431 Guitar (1-2)

MUSL 132, 232, 332, 432 Strings (1-2)

MUSL 133, 233, 333, 433 Woodwinds (1-2)

MUSL 134, 234, 334, 434 Brass (1-2)

MUSL 135, 235, 335, 435 Percussion (1-2)

MUSL 136, 236, 336, 436 Electronic Instruments (1-2)

MUSL 137, 237, 337, 437
Voice (1-2)

MUSL 138, 238, 338, 438
Composition (1-2)

MUSL 139, 239, 339, 439
Jazz (1-2)

MUSL 350, 450
Conducting (1-2)

MUSIC/PERFORMING (MUSP)

MUSP 140, 240, 340, 440
Wind Symphony (1)
A symphony comprised of serious wind and percussion students, including music majors and non-music majors, who perform a wide variety of standard and current literature. Audition with conductor required.

MUSP 141, 241, 341, 441
Symphony Orchestra (1)
Ensemble designed to rehearse and perform symphonic literature as well as choral, opera and concerto repertoire. Audition required.

MUSP 144, 244, 344, 444
Jazz Ensemble (1)
A group utilizing stage band instrumentation and performing many local and required concert engagements. By audition; preference given to members of Symphonic Band.

MUSP 145, 245, 345, 445
Chamber Ensembles (1)
Various chamber groups organized by the faculty according to the talents and interests of the members. Membership approval by the faculty. A minimum of one public performance per semester is required. Prerequisite: Membership approval by the director.

MUSP 146, 246, 346, 446
Community Performance Organizations (1)
Opportunity for students and other musicians in the community to participate in various community musical groups, such as the Grand Junction Symphony. Audition with conductor is required.

MUSP 147, 247, 347, 447
Marching Band (0-1)
Rehearsal and presentation of musical and physical performance proficiencies. Specific skills associated with self-discipline, leadership, and individual and ensemble performance are developed. Advanced practice in physical alignment, balance, endurance, flexibility, and strength in technical competency. Available to all university students. Offered every fall semester. Monday/Wednesday/Friday 6:00-8:00 p.m., football practice field. Audition or consent of instructor required. Previous band experience highly recommended. Only MUSP 147 counts as a KINA activity credit.

MUSP 148, 248, 348, 448
Chamber Orchestra (1)
Ensemble designed to rehearse and perform chamber orchestra works. This ensemble will involve strings as well as woodwind and brass instruments. Audition required.

MUSP 150, 250, 350, 450
Concert Choir (1)
The major large choir, open to all students and staff who enjoy singing, with final membership approved by the director. Concert Choir performs great choral literature of all types representing Colorado Mesa University in formal concerts both on and off campus including concert tours, performing large-scale masterworks with orchestra.

MUSP 156, 256, 356, 456
Chamber Choir (1)
An advanced smaller choral ensemble which performs vocal literature from Renaissance to Contemporary art music including jazz. Chamber Choir performs on and off campus, on concert tours, and at the annual Madrigal Dinners. Staff and students are eligible by audition; membership in Concert Choir generally a prerequisite.

MUSP 157, 257, 357, 457
Male Choir (1)
Campus-wide chorus open to all interested students and faculty. Performs all types of music written for combined men's voices. Concertizes in conjunction with other university choral ensembles and in separate performances on-off campus. Prerequisites: Taken in sequence. Members must perform a brief audition with instructor.

MUSP 158, 258, 358, 458
Women's Chorus (1)
Performances include the complete range of music written for combined women's voices, both on and off-campus, and in conjunction with the other university choral ensembles in Music Department concerts. Prerequisites: consent of director.

MUSP 159, 259, 359, 495
Vocal Jazz Ensemble (1)
Exploration of wide range of vocal literature. Performances given, both on and off campus. Prerequisites: consent of instructor.

MUSP 162, 262, 362, 462
Combo (1)
Interested students team up with a rhythm section in learning tunes and "head" charts, improving skills and making practical application of improvisation.

MUSP 320 Junior Recital (1)
Preparation and successful completion of junior-level recital/presentation in the student's concentration. Recital/presentation must be approved by the music faculty and given during the semester in which the student is registered for this course. Required for Music Performance majors. Must include scholarly program notes covering historical aspects, analytical issues, and/or performance considerations of the recital repertory. Corequisite: 1 credit of MUSL 300-level.

MUSP 365 Opera Workshop (1)
Development of vocal performance operatic skills for majors and minors within a musical and theatrical workshop. Operatic repertoire selected for class study. Stage movement, character study, audition techniques, resume construction and mock auditions incorporated. Prerequisite: Completion of Sophomore Review. Corequisite: MUSL 337.

MUSP 395 Independent Study (1-3)

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MUSP 396 Topics (1-3)

MUSP 420 Senior Recital/ Presentation (1)
Preparation and successful completion of senior-level recital/presentation in the student's concentration. Recital/ presentation must be approved by the music faculty and given during the semester in which the student is registered for this course. A music recital is required for Performance and Music Education majors and must include scholarly program notes (required for the official printed senior recital program) covering historical aspects, analytical issues, and/or performance considerations of the recital repertory. Students in the Liberal Arts or Elective Studies in Business programs may likewise present recital or, alternatively, may elect to give a faculty-approved "capstone presentation" (e.g., lecture/ recital; lecture/demonstration; or other presentation of creative work such as video, original compositions, arrangements, etc.). Performance majors take this course for two credits; all other music majors take this course for one credit.

MUSP 465 Opera Scenes (1)
Continuation of artistic and technical skills introduced in MUSP 365. Focus on operatic production of staged, public performance of either selected opera scenes or a one or two-act opera. Prerequisites: Completion of Sophomore Review or instructor approval. Corequisites: MUSL 437 or instructor approval.

MUSP 495 Independent Study (1-3)

MUSP 496 Topics (1-3)

NURSE AIDE TRAINING (NURA)

NURA 101 Nurse Aide Healthcare Skills (4)
Fundamental skills of the nurse aide. Basic nursing skills, communication skills, restorative services, personal care skills, safety and emergency care covered. Includes knowledge and/or principles of asepsis, OSHA and HIPAA regulations. Ethical behaviors, cultural sensitivity, principles of mental health, patient/ resident rights addressed.

NURA 170 Nurse Aide Clinical Experience (1)
Applies knowledge and skill gained in NURA 101 to patient care. Independent functioning within the nurse aide scope of practice in applying knowledge and skills gained in Nurse Aide Healthcare Skills. Enhanced communication, cultural competency, end of life care, critical thinking and organizational skills emphasized. Prerequisite: NURA 101.

NURSING (NURS)

NURS 101 Pharmacology Calculations (1)
Course introduces the concepts and techniques of dosage calculations and medication administration by a variety or routes. Application of basic math concepts to complex conversion of dosages between and among various systems of weights and volumes, and application of critical thinking skills to the calculation and administration of medications by oral and parenteral (including intravenous) routes of administration. Prerequisites: BIOL 209/209L, BIOL 210/210L, BIOL 241, MATH 113, ENGL 111, ENGL 112, PSYC 150, and PSYC 233. Corequisites: NURS 106/106L and NURS 107/107L.

NURS 105L Nursing IV Certification (1)
Introduction to theoretical and clinical skills essential for IV certification. Corequisites: NURS 106/106L. Prerequisites: BIOL 209/209L, BIOL 210/210L, ENGL 111, ENGL 112, PSYC 233.

NURS 106 Adult Concepts I/ Pharmacology (5)
Exploration of the role of the nurse in assessing the medical and surgical clients' needs across the lifespan. Includes an introduction to basic pharmacology including interactions, classification and adverse effects with a specific emphasis on teaching. Prerequisites: BIOL 209/209L, BIOL 210/210L, BIOL 241, ENGL 111, ENGL 112, MATH 113, PSYC 150, and PSYC 233. Corequisite: NURS 101, NURS 106L, and NURS 107/107L.

NURS 106L Adult Concepts 1/ Pharmacology Laboratory (2)
Application of nursing concepts, skills, critical thinking, pharmacology, assessment and medication administration in caring for a variety of clients in various health care settings. Prerequisites: BIOL 209/209L, BIOL 210/210L, BIOL 241, ENGL 111, ENGL 112, MATH 113, PSYC 150, and PSYC 233. Corequisite: NURS 101, NURS 106, and NURS 107/107L.

NURS 107 Foundations of Nursing (3)
Exploration of basic nursing concepts and skills to develop critical thinking while utilizing the nursing process. Prerequisites: BIOL 209/209L, BIOL 210/210L, BIOL 241, ENGL 111, ENGL 112, PSYC 150, PSYC 223, and MATH 113. Corequisite: NURS 101, NURS 106/106L, and NURS 107L.

NURS 107L Foundations of Nursing Laboratory (3)
Application of basic nursing and IV certification skills through training, practice, and checkoffs of essential skills needed for safe practice. Prerequisites: BIOL 209/209L, BIOL 210/210L, BIOL 241, ENGL 111, ENGL 112, MATH 113, PSYC 150, and PSYC 233. Corequisite: NURS 101, NURS 106/106L, and NURS 107.

NURS 112 Basic Concepts of Pharmacology (2)
Course introduces the basic concepts of pharmacology related to actions, therapeutic and adverse effects, interactions of drugs, drug classification and the basic pharmacology of commonly used medications. Emphasis is placed on nursing considerations and client education. Prerequisites: BIOL 209/209L, BIOL 210/210L, ENGL 111, ENGL 112, PSYC 233.

NURS 117 Obstetrics and Pediactrics (4)
Exploration of fundamental content in the nursing care of the childbearing family, which focuses on pregnancy, physiologic and psychological changes experienced, and care of the normal newborn. Includes the individual needs of the child from infancy through adolescence focusing

on developmental stages, as well as childhood diseases and illness within each stage. Prerequisites: NURS 101, NURS 106/106L, and NURS 107/107L. Corequisite: NURS 117L, NURS 156, and NURS 172/172L.

NURS 117L Obstetrics and Pediatrics Laboratory (2)
Application of concepts related to pregnancy, newborns, and children from infancy to adolescence utilizing critical thinking, nursing process, and assessment in caring for this population within the various health care settings. Prerequisites: NURS 101, NURS 106/106L, and NURS 107/107L. Corequisite: NURS 117, NURS 156, and NURS 172/172L.

NURS 156 Socialization into Practical Nursing (1)
Introductory concepts for first time management. Examines legal and ethical responsibilities of the practical nurse. Emphasis is given to the Colorado Nurse Practice Act. Job seeking skills are discussed. Prerequisites: Must be eligible for graduation during semester in which NURS 156 is taken - completion of NURS 101,NURS 106/106L, NURS 107/107L. Corequisites: NURS 117/117L and NURS 172/172L.

NURS 172 Adult Concepts II/Mental Health (5)
Exploration of concepts of medical surgical clients related to deviations from health and wellness utilizing critical thinking within the nursing process. Incorporates assessment and teaching of clients around the health care continuum. Prerequisites: NURS 101, NURS 106/106L, NURS 107/107L. Corequisite: NURS 117/117L, NURS 156, and NURS 172L.

NURS 172L Adult Concepts II /Mental Health Laboratory (4)
Application of clinical practicum to apply nursing theory in medical surgical nursing using the nursing process to assist clients with more complex health care needs. Incorporates fundamental knowledge of mental health and illness from a holistic perspective while providing experiences which focus on mental health. Prerequisites: NURS 101, NURS 106/106L, NURS 107/107L. Corequisite: NURS 117/117L, NURS 156, and NURS 172.

NURS 200 LPN to RN Role Transition (1)
Prepares the advanced placement student to enter the Nursing Program through orientation to the program, review of the nursing process and exploration of the role change from practical to professional nursing. Introduction to selected concepts related to the role of the Associate Degree nurse as a provider of care, teacher, manager, client advocate and member of the profession. Emphasis placed on critical thinking in providing and managing comprehensive care in a variety of health care settings with clients across the lifespan. Course is designed to assist the Licensed Practical Nurse with the transition into the practice of professional nursing. Prerequisites: All essential learning education and program prerequisites.

NURS 206 Advanced Concepts of Medical-Surgical Nursing I (3)
NURS 206L Advanced Concepts of Medical-Surgical Nursing Laboratory (2)
Role of the registered professional nurse as care provider, teacher, manager, professional and advocate in meeting the nursing care needs of adults across the life span experiencing illness to wellness. The clinical lab provides opportunity for the student to utilize the nursing process and integrate previous learning to assist the patient and family in achieving optimal functioning in the various health care settings. Corequisites: NURS 206/206L and NURS 288.

NURS 210 Nursing Care of Complex Obstetrical and Pediatric Clients (3)
[AAS Program only] Prepares the professional nurse to comprehend and apply advanced concepts in care of the high-risk child bearing family and for children with complex health problems from birth through adolescence. Emphasizes special needs and complications during the perinatal experience and altered functioning, special needs, and disease processes manifested in children. The nursing process is used as a framework to attain optimal levels of maternal-newborn and pediatric health and wellness. Legal and ethical accountability are integrated throughout the course. Critical thinking skills are utilized throughout. Prerequisites: All general education and prerequisites, NURS 288 and 200. Corequisite: NURS 210L

NURS 210L Nursing Care of Complex Obstetrical and Pediatric Clients Laboratory (1)
Prepares the professional nurse to comprehend and apply advanced concepts in the care of the high-risk child bearing family and for children with complex health problems from birth through adolescence. Emphasizes special needs and complications during the prenatal experience and altered functioning, special needs and disease process manifested in children. The nursing process is used as a framework to attain optimal levels of maternal-newborn and pediatric health and wellness. Legal and ethical accountability and critical thinking skills are integrated throughout the course. Theoretical content is applied in acute care and community clinical settings. Prerequisites: NURS 200, NURS 206/206L, NURS 211/211L, NURS 286, and NURS 288. Corequisites: NURS 210, NURS 216/216L, and NURS 289.

NURS 211 Nursing Care of the Psychiatric Client (3)
NURS 211L Nursing Care of the Psychiatric Client Laboratory (1)
Develops concepts of psychosocial integrity and emphasizes the function and responsibility of nursing in promoting and maintaining mental health of individuals and families. This course emphasizes communication and caring through the application of the therapeutic relationship and nursing process in the care and treatment of common clinical conditions/disorders. In the clinical lab students will develop proficiency in working with psychiatric clients in various settings in the community. Prerequisites: NURS 200, NURS 206, NURS 206L, NURS 286, and NURS 288. Corequisites: NURS 211 and NURS 217.

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NURS 216 Advanced Concepts of Medical Surgical Nursing II (2)
[AAS Program only] Continues to focus on the role of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the complex medical and surgical health care needs of adult clients. Utilizing the nursing process, the student is expected to integrate previous learning to assist the patient and family in achieving optimal functioning in various complex health care situations and settings. Prerequisites: All essential learning and prerequisites, NURS 206, NURS 288, and NURS 200. Corequisite: NURS 216L.

NURS 216L Advanced Concepts of Medical Surgical Nursing II Laboratory (3)
Continues to focus on the role of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the complex medical and surgical health care needs of adult clients. Utilizing the nursing process, the student is expected to integrate previous learning to assist the patient and family in achieving optimal functioning in various complex health care situations and settings. In addition to inpatient acute care patient units the student will rotate through the critical care areas of the health care facility. Prerequisites: NURS 200, NURS 206/206L, NURS 211/211L, NURS 217, NURS 286, and NURS 288. Corequisites: NURS 210/210L, NURS 216, and NURS 289.

NURS 217 Leadership for Professional Nursing Practice (2)
[AAS Program only] Socializes the student into the graduate registered nurse role. The focus is on the exploration and analysis of contemporary nursing practice, current trends and issues impacting nursing care delivery. Advanced leadership and management concepts are discussed as part of the nursing role. Prerequisites: All essential learning and prerequisites, and NURS 200.

NURS 286 Advanced Pharmacology for Nurses (2)
Focuses on advanced concepts of pharmacology within nursing with an emphasis on nursing process, drug doses, calculations and relevant assessments and patient teaching. Prerequisite: LPN license. Corequisites: NURS 200, 206/206L, and NURS 288.

NURS 288 Health and Physical Assessment for Nursing (2)
[AAS Program only] Development of the knowledge necessary for completing health assessment across the life span. History taking, physical assessment skills, and principles of health promotion are utilized to develop appropriate interventions designed to assist clients with health promotion and life style changes. Prerequisites: All essential learning and prerequisites. Corequisite: NURS 206 and 200.

NURS 289 Capstone: Comprehensive Nursing Internship (2)
Facilitates transition from student to graduate nurse through application of nursing principles and skills in an area of health care delivery. Critical thinking, life long learning, nursing process, caring, collaboration, and health teaching and promotion are emphasized. Prerequisites: All prerequisites for the AAS program, NURS 200, NURS 206/206L, NURS 211/211L, NURS 217, NURS 286, NURS 288. Corequisites: NURS 210/210L and NURS 216/216L.

NURS 300 Developing the Baccalaureate Role (3)
Designed to facilitate the transition from diploma or associate degree registered nurse to professional practice of nursing at the baccalaureate level. Development of leadership and management skills in the context of the dynamic field of health care including effective communication, resolution, critical thinking, management of resources and quality improvement. Focus on the role of nurse leader and manager as a safety using evidence based practice principles. Prerequisites for RN-BSN students: RN licensure and admission to RN-BSN program. All prerequisite essential learning course work for the BSN degree must be completed before starting the 300-level nursing courses.

NURS 301 Medical Surgical Process (4)
NURS 301L Medical-Surgical Nursing Laboratory (4)
Application of nursing process. Care of individuals and families experiencing deviations from usual levels of wellness from onset to resolution. Pathophysiological problems of moderate intensity and relative stability explored. Nursing process used to support the coping mechanisms of individuals and families to assist in the regaining and maintaining of optimal wellness. Prerequisites: NURS 201/201L, 202/202L, 203, 204. Corequisites: NURS 302, 303, 304.

NURS 302 Family Nursing Through the Lifespan (3)
Theory of family-centered practice in nursing. Utilization of nursing process. Collect and analyze data to formulate and evaluate interventsion with families from diverse backgrounds. Selected learning experiences provide opportunities for development of cognitive, psychomotor and effective competencies essential to the care of both healthy and high-risk families through the lifespan. Prerequisites: NURS 201/201L, 202/202L, NURS 203, and NURS 204. Corequisites: NURS 301/301L, and NURS 303.

NURS 303 Professional Development (2)
Introduction to discipline of nursing. Emphasis on knowledge and skills related to professional evidence-based practice. Identification of legal and ethical issues. Discussion of quality practice and beginning skills required in time management. Teaching-learning theories. The role of the professional in nursing. Examination of continuum of patient care provided by multi-disciplinary teams using current evidence-based practice as basis for nursing care. Prerequisites: NURS 201/201L, 202/202L, 203, 204. Corequisites: NURS 301/301L, 302, 304.

NURS 304 Pharmacology II (2)
Continuation of Pharmacology I covering the nursing process, principles of pharmacokinetics, pharmacodynamics, pharmacotherapeutics and toxicity of major drug classifications. Prerequisites: NURS 201/201L, 202/202L, 203, 204. Corequisites: NURS 301/301L, 302, 303.

NURS 313 Mental Health Nursing (3)
NURS 313L Mental Health Nursing Laboratory (2)
Development of knowledge base of mental health and illness. Emphasis on development of interpersonal skills in the use of the therapeutic relationship. Specific learning experiences provide opportunities to develop proficiency in the practice of psychiatric mental health nursing with diverse populations. Prerequisites: NURS 301/301L, 302, 303, 304. Corequisites: NURS 314/314L, 315/315L.

NURS 314 The Childbearing Family (3)
NURS 314L The Childbearing Family Laboratory (2)
Study of competencies needed to care for diverse childbearing family including preconception, prenatal, pregnancy antepartum and postpartum. High risk and complications of pregnancy addressed as well as critical issues of women's health care. Theoretical content applied in acute care and community settings. Prerequisites: NURS 301/301L, 302, 303, 304. Corequisites: NURS 313/313L, 315/315L.

NURS 315 Pediatric Nursing (2)
NURS 315L Pediatric Nursing Laboratory (1)
Emphasis on growth and developmentally appropriate management of health and illness related needs of the child within the family. Patho-psychological and psycho-social dysfunctions of children and adolescents explored. Nursing process used to systematically gather and analyze data and formulate interventions. Prerequisites: NURS 301/301L, 302, 303, 304. Corequisites: NURS 313/313L, 314/314L.

NURS 318 Health Assessment and Promotion (3)
Development of the knowledge necessary for completing health assessment across the life span. History taking, physical assessment skills, and principles of health promotion are utilized to develop appropriate interventions designed to assist clients with health promotion and prevention over the life span. Prerequisites: BIOL 250/250L, BIOL 209/209L, BIOL 210/210L, BIOL 241, ENGL 111, ENGL 112, MATH 113, ESSL 290, ESSL 200, PSYC 233, KINE 100, KINA Activity course, other essential learning requirements (1 selection each from the Natural Sciences, History, Humanities, and Fine Arts Categories) and admission to the LPN-BSN Program. Corequisites: NURS 318L, NURS 329/329L, and NURS 400.

NURS 318L Health Assessment and Promotion Laboratory (1)
Exploration of advanced topics in network and web-based application security such as network vulnerability management, network monitoring, intrusion detection and prevention, government and industry security compliances, wireless security, most common web application security flaws, browser and database security principles, and authentication and authorization in web applications. Prerequisites: BIOL 250/250L, BIOL 209/209L, BIOL 210/210L, BIOL 241, ENGL 111, ENGL 112, MATH 113, ESSL 290, ESSL 200, PSYC 233, KINE 100, KINA Activity course, other essential learning requirements (1 selection each from the Natural Sciences, History, Humanities, and Fine Arts Categories) and admission to the LPN-BSN Program. Corequisites: NURS 318, NURS 329, NURS 329L, and NURS 400.

NURS 320 Health Assessment and Promotion for the Nurse (3)
Apply knowledge necessary for completing a child, adult, and geriatric client health assessment. Use history taking and physical assessment skills to develop appropriate interventions designed to assist clients with health promotion and lifestyle changes. Apply principles of health promotion through the life span in a variety of settings. Prerequisite: Admission to the RN-BSN Program or practicing RN with current license and permission of the instructor.

NURS 320L Health Assessment and Promotion for the Nurse Laboratory (1)
Application of knowledge necessary for completing a child, adult, and geriatric client health assessment. Use of history-taking and physical assessment skills to develop appropriate interventions designed to assist clients with health promotion and lifestyle changes. Application of principles of health promotion through the lifespan in a variety of settings. Prerequisite: Admission into RN-BSN program or practicing RN with current license and permission of the instructor.

NURS 329 Advanced Adult Health I/ Pharmacology (5)
Exploration of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the nursing care needs of adults across the life span. Focuses on advanced concepts of pharmacology within nursing with an emphasis on nursing process, drug doses, calculations and relevant assessments, and patient teaching. Prerequisites: BIOL 250/250L, BIOL 209/209L, BIOL 210/210L, BIOL 241, ENGL 111, ENGL 112, MATH 113, ESSL 290, ESSL 200, PSYC 233, KINE 100, KINA Activity course, other essential learning requirements (1 selection each from the Natural Sciences, History, Humanities, and Fine Arts Categories) and admission to the LPN-BSN Program. Corequisites: NURS 329L, NURS 318/318L, and NURS 400.

NURS 329L Advanced Adult Health I/Pharmacology Laboratory (3)
Exploration of the registered professional nurse as care provider, teacher, manager, professional and advocate in meeting the nursing care needs of adults across the life span. Students will utilize the nursing process and integrate previous learning to assist the patient and family in achieving optimal functioning in the various health care settings. Prerequisites:

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BIOL 250/250L, BIOL 209/209L, BIOL 210/210L, BIOL 241, ENGL 111, ENGL 112, MATH 113, ESSL 290, ESSL 200, PSYC 233, KINE 100, KINA Activity course, other essential learning requirements (1 selection each from the Natural Sciences, History, Humanities, and Fine Arts Categories) and admission to the LPN-BSN Program. Corequisites: NURS 329, NURS 318, NURS 318L, and NURS 400.

NURS 350 Health Assessment Across the Lifespan (3)
Introduction to the basic skills of history taking and physical assessment of individuals through the lifespan. Emphasis on knowledge and skills necessary for conducting a systematic or focused health assessment and determining areas in which to implement health promotion activities. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 350L, NURS 353, NURS 353L, NURS 370, and NURS 372.

NURS 350L Health Assessment Across the Lifespan Laboratory (1)
Application of knowledge and clinical skills in obtaining a health history and performing a physical examination of individuals across the lifespan. Focus is on the practice and refinement of psychomotor, communication, and critical thinking skills with an emphasis on privacy, confidentiality, and safety. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 350, NURS 353, NURS 353L, NURS 370, and NURS 372.

NURS 353 Foundation of Nursing Practice (4)
Introduction to the fundamentals of nursing practice and the knowledge required to implement patient-centered care through the lifespan in a variety of settings. Focus is on safety, basic nursing care, assessment, communication, documentation, and quality care. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 350, NURS 350L, NURS 353L, NURS 370, and NURS 372.

NURS 353L Foundations of Nursing Practice laboratory (3)
Application of fundamental concepts and evidenced-based nursing skills in settings that provide safe learning opportunities. Sites include clinical labs, simulation labs, and an array of local healthcare facilities. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 350, NURS 350L, NURS 353, NURS 370, and NURS 372.

NURS 370 Pharmacology for Nurses I (3)
Introduction to drug therapy including specific drug classifications, terminology, theories and techniques of safe administration. Focus on nursing considerations, utilizing the nursing process, and becoming proficient at medication calculations. Major content includes the basic concepts of pharmacology, commonly prescribed drugs, drug effects on body tissues, responses to drug therapy, and principles of therapy in various circumstances and populations. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 350, NURS 350L, NURS 353, NURS 353L, and NURS 372.

NURS 372 Professional Development I: Nursing Theory, Roles and Ethics (2)
Introduction to knowledge, skills, and attitudes related to nursing practice. Emphasis on history of professional nursing, nursing theory, legal, ethical, and safety issues. Exploration of principles of communication, time management, and critical thinking as they relate to the professional nurse. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 350, NURS 350L, NURS 353, NURS 353L, and NURS 370.

NURS 373 Acute and Chronic Illness I (4)
Application of the nursing process in care of individuals and families experiencing deviations from usual levels of wellness. Exploration of pathophysiology of moderate intensity and relative stability. Emphasis on identification of coping mechanisms of individuals and families to assist in health recovery, health promotion, and the adoption of strategies for illness prevention. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 373L, NURS 388/388L, and NURS 394.

NURS 373L Acute and Chronic Illness I Clinical (3)
Application of nursing process in care of individuals and families in acute and chronic health care settings. Emphasis on patient safety, health promotion, multi-disciplinary health care and the uniqueness of individual response to disease. Development of essential skills of assessment, problem identification, goal setting, application of interventions, evaluation of outcomes, cultural sensitivity, and critical thinking skills. Prerequisities: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 373, NURS 388/388L, and NURS 394.

NURS 388 Mental Health Nursing (3)
Introduction to patient-centered, culturally sensitive approach to needs of individuals, families, and groups experiencing alterations in mental health across the lifespan. Emphasis on theoretical knowledge and evidence-based practice to promote, maintain and restore mental and emotional health. Exploration of use of self as a therapeutic tool, principles of therapeutic relationships and communication and a knowledge-base of psychopathology. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 373/373L, and NURS 388L and NURS 394.

NURS 388L Mental Health Nursing Clinical (2)
Application of theory in care of clients with a wide-range of psychiatric and/or mental health disorders across the lifespan. Emphasis on the nurse's role in various treatment settings and current

treatment modalities. Development of proficiency in mental health practice with diverse populations. Emphasis on therapeutic use of self with individuals and groups in a variety of community-based settings. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 373/373L, and NURS 388 and NURS 394.

NURS 394 Nursing Research: An Evidenced-Based Practice (3)
Exploration of nursing research and evidence-based practice in the process of scholarly inquiry in health care. Examination of research methodologies and related theories to facilitate development of a literature review and an evidence-based practice proposal to investigate nursing questions and outcomes. Emphasis on research as a basis for assessment of outcomes of health promotion and health care interventions. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 373/373L and NURS 388/388L.

NURS 395 Independent Study (1-3)

NURS 396 Topics (1-3)

NURS 400 Nursing Research (3)
Exploration of evidence-based practices related to outcomes within the health care setting. Research questions relevant to clinical practice are developed and pursued. Prerequisites: BIOL 250/250L, BIOL 209/209L, BIOL 210/210L, BIOL 241, ENGL 111, ENGL 112, MATH 113, ESSL 290, ESSL 200, PSYC 233, KINE 100, KINA Activity course, other essential learning requirements (1 selection each from the Natural Sciences, History, Humanities, and Fine Arts Categories) and admission to the LPN-BSN Program. Corequisites: NURS 318/318L, and NURS 329/329L.

NURS 403 Population Health Nursing (2)
NURS 403L Population Health Nursing Laboratory (1)
Theoretical basis for nursing populations and community aggregates. Analyze health of populations from a macro system perspective. Assess health of, plan interventions for populations. Assess efficacy of these interventions and consider the effect of policy and finance on the health of these populations. Population risk reduction will be used to develop nursing interventions for high-risk aggregates. Application of course content will be demonstrated in a concurrent clinical course. Prerequisites: NURS 313/313L, 314/314L, 315/315L.

NURS 406 Advanced Medical/ Surgical Nursing(3)
NURS 406L Advanced Medical/ Surgical Nursing Laboratory (3)
Advanced medical-surgical concepts essential for nursing care of adults requiring intervention in relation to complex multi system illness or injury. The clinical practicum provides opportunity for application of nursing care in institutional and community settings. Three one-hour lectures and three three-hour laboratories per week. Prerequisites: NURS 312, 313/313L, 314/314L, 315/315L. Corequisites: NURS 403/403L, 407, 415.

NURS 407 Nursing Research (3)
Emphasis on the assessment of the outcomes of health promotion of health promotion and health care interventions. Research questions relevant to clinical practice developed, with projects presented at the poster presentation at the end of the semester. Prerequisite: STAT 200. Corequisites: NURS 403/403L, and NURS 406/406L.

NURS 408 Health Information Systems (3)
Explores the use of information systems in health care and nursing practice. Examines current trends and issues in using, designing, and implementing heath care information systems, healthcare information management, decision support and knowledge management applications in the context of challenges facing healthcare organizations today. Explores legal and ethical issues as related to the protection of the privacy, confidentiality, and security of information in health care environments, utility of wide array of personal health information management and social networking tools in communicating health-related information. Prerequisites: RN degree at the associate or diploma level; permission of instructor; application in to HITS program.

NURS 409 Quality Assessment and Improvement in Health Care Settings (3)
Review of outcomes-based quality assessment and improvement methods. Focuses on techniques of measuring quality of care, customer satisfaction, and safety. Implementation of quality management programs, and creating a culture supporting adherence to best practices and standards. Prerequisite: permission of instructor.

NURS 410 Public and Population Health (3)
Theoretical basis for nursing population and community aggregates. Analyze health of population from a macro-system perspective. Perspective utilized to assess the health of and plan interventions for populations. Evaluate efficacy of these interventions and consider the effect of policy and finance on the health of these populations. Population risk reduction used to develop nursing interventions for high-risk aggregates. Corequisite: NURS 410L. Prerequisites: NURS 320/320L.

NURS 410L Public and Population Health Laboratory (1)
Theoretical basis for nursing population and community aggregates. Analyze health of population from a macro-system perspective. Perspective utilized to assess the health of and plan interventions for populations. Evaluate efficacy of these interventions and consider the effect of policy and finance on the health of these populations. Population risk reduction used to develop nursing interventions for high-risk aggregates. Application of course content will be demonstrated in the concurrent clinical course. Corequisite: NURS 410. Prerequisites: NURS 320/320L.

NURS 411 Nursing Leadership (2)
NURS 411L Nursing Leadership Laboratory (1)
Leadership and management theory utilized in development of characteristics of a nurse leader. Role

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of the professional nurse as change agent in shaping health care for the future is explored. Prerequisites: NURS 403/403L, 406/406L, 407. Corequisite: NURS 412L, NURS 415, and NURS 416.

NURS 412L Senior Specialty Laboratory (4)
Development of specialty-focused knowledge and skills in a specified area of interest. Knowledge and skills from basic and upper-division essential learning and nursing disciplines are integrated when implementing increasingly complex roles to deliver quality nursing care to individuals and groups in a focused clinical area. Prerequisites: NURS 403/403L, 406/406L, 407. Corequisites: NURS 411/411L, 415, 416.

NURS 413 Community Health Micro Systems (2)
Theoretical basis for nursing individuals and families across community settings evaluated and analyzed. Analyze multiple roles available to nurses in the community. Assessing, planning, and evaluating care for community individuals, families and microsystems. Applications of transitions of care and financing concepts in the community care setting. Application of course content will be demonstrated in concurrent clinical course. Corequisite: NURS 413L. Prerequisites: NURS 313/313L, NURS 314/314L, and NURS 315/315L.

NURS 413L Community Health Micro Systems Laboratory (1)
Theoretical basis for nursing individuals and families across community settings evaluated and analyzed. Analyze multiple roles available to nurses in the community. Assessing, planning, and evaluating care for community individuals, families and microsystems. Applications of transitions of care and financing concepts in the community care setting. Application of course content will be demonstrated in concurrent clinical course. Corequisite: NURS 413. Prerequisites: NURS 313/313L, NURS 314/314L, and NURS 315/315L.

NURS 415 Business of Health Care (2)
Appraisal of financial indicators on impact of health outcomes explored in the context of the professional's ability to provide quality care to a diverse patient population. Prerequisites: NURS 403/403L, 406/406L, 407. Corequisites: NURS 411/411L, 4/12L, 416.

NURS 416 Transition to Professional Nursing (2)
Exploration of core competencies for a BSN. Four core competencies: Communication, Assessment, Technical Skills, and Critical Thinking. Competencies examined from the perspective of a graduating nurse about to transition into the professional world of nursing. Prerequisites: NURS 403/403L, 406/406L, 407. Corequisites: NURS 411/411L, 412L, 415.

NURS 417 Forensic Science: The Human Interface (2)
Introduces the principles of forensic science as they relate to care of individuals experiencing events which require intervention from both the legal and health care systems. Integrates concepts from health care, psychology, sociology, criminology used to clinically investigate crimes against humans. Focuses on the unique knowledge and attributes that health care professionals contribute to multidisciplinary forensic investigation. Addresses various aspects of forensic investigation including role of the forensic scientist in working with the victim and the perpetrator, wound identification and collection of evidence. Specific areas of domestic violence, sexual assault, elder abuse, gang behavior, death investigation, victims' advocacy and courtroom dynamics are included. Students will experience forensic investigation in clinical areas. Prerequisite: Acceptance into the B.S.N. program, or consent of instructor.

NURS 418 Gerontological Nursing and Chronic Illness (3)
Evaluate current key clinical information and issues central to caring for the highly specialized physiological and psycho-social needs of older adults. Review of the current financial, social, political, and cultural issues that affect nursing care for the elderly explored through a geriatric nursing curriculum in a scientifically sound, holistic process to provide care to this vulnerable population.

NURS 420 Global Health (3)
This is a multidimensional course for nursing students who want to broaden their understanding of health care in the global community The course involves pre-trip seminars, travel to a country of focus and post-trip sessions. Attendance is required at all sessions. Level Two nursing preparation recommended. The pre-trip seminars are conducted by the lead faculty and guest speakers. Students will prepare and present on topics during the seminars and will have opportunities to develop leadership skills. Within the focus country, students will travel as a group, meeting local health care professionals, student nurses, and nursing faculty. Students will volunteer alongside local providers, delivering care within their scope of practice and the boundaries delineated by the Ministry of Health. Opportunities to develop critical thinking skills, the nursing process and culturally sensitive care will be part of the pre-trip and in-country experiences. A post-trip seminar and a presentation to the community are also mandatory.

NURS 421 Population Health (4)
NURS 421L Population Health Laboratory (2)
Approaches to care and finance in the community care setting. Application of population risk reduction used to develop nursing interventions for high risk aggregates. Prerequisities: NURS 318, NURS 318L, NURS 329, NURS 329L, and NURS 400. Corequisites: NURS 421, NURS 427, and NURS 427L.

NURS 422 Nursing Roles in the Community (2)
Theoretical basis for nursing individuals and families across community settings evaluated and analyzed. Analyze multiple roles available to nurses in the community. Assessing, planning, and evaluation of care for community individuals, families, and microsystems. Transitions of care analyzed for outcomes, policy and financial impact

on health care systems. Prerequisites: NURS 320/320L. Corequisite: NURS 422L.

NURS 422L Nursing Roles in the Community Laboratory (1)
Theoretical basis for nursing individuals and families across community settings evaluated and analyzed. Analyze multiple roles available to nurses in the community. Assessing, planning, and evaluation of care for community individuals, families, and microsystems. Transitions of care analyzed for outcomes, policy and financial impact on health care systems. PrerequisitesL NURS 320/320L. Corequisite: NURS 422.

NURS 426 Nursing Research and Evidence Based Practice (3)
Emphasis on nursing research and evidence-based practice in the process of scholarly inquiry in health care. Examination of research methodologies and related theories to facilitate development of a research proposal to investigate health care questions and outcomes. Prerequisites: MATH 113 and STAT 200.

NURS 427 Mental Health (3)
Exploration of psychosocial integrity with emphasis on the function and responsibility of nursing in promoting and maintaining mental health of individuals and families. This course emphasizes communication and caring through the application of the therapeutic relationship and nursing process in the care and treatment of common clinical conditions/disorders. Prerequisites: NURS 318/318L, NURS 329/329L, and NURS 400. Corequisites: NURS 427L, and NURS 421/421L.

NURS 427L Mental Health Laboratory (1)
Approaches to psychosocial integrity with emphasis on the function and responsibility of nursing in promoting and maintaining mental health of individuals and families. Students will develop proficiency in working with psychiatric clients in various settings in the community. Prerequisites: NURS 318, NURS 318L, NURS 329, NURS 329L, and NURS 400. Corequisites: NURS 427, NURS 421, and NURS 421L.

NURS 428 Evidence Based Nursing and Research II (3)
Application of research concepts in development of a formal research proposal related to nursing practice. Identification of a research question on a topic of interest, development of theoretical framework, literature review, sample selection, measurement strategies, data collection, and analysis methods are emphasized. Prerequisites: Admission to the RN-BSN Program, NURS 426, STAT 200, and MATH 113.

NURS 429 Adult Health II (3)
Exploration of the role of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the complex medical and surgical health care needs of critically ill adult clients. Students are expected to integrate previous learning to assist the patient and family in achieving optimal functioning in various complex health care situations and settings. Prerequisites: NURS 421/421L, and NURS 427/427L. Corequisites: NURS 429L, NURS 431/431L, NURS 449/449L, and NURS 450.

NURS 429L Adult Health II Laboratory (3)
Integration of previous learning to assist the patient and family in achieving optimal functioning in various complex health care situations and settings. In addition to inpatient acute care units, the student will rotate through the critical care areas of the health care facility. Prerequisites: NURS 400, NURS 421, NURS 421L, NURS 427, and NURS 427L. Corequisites: NURS 429, NURS 431, NURS 431L, NURS 449, NURS 449L, and NURS 450.

NURS 430 Leadership for the RN (3)
The multiple nursing leadership roles at the baccalaureate level. Business and culture of health care. Roles include mentorship, change agents that inform, direct and manage the organizational structure, and evaluation of multiple health care systems. Evaluation of legislative and organizational policies influencing health care trends. Prerequisites: Admission to the RN-BSN Program, NURS 426, and NURS 428. Corequisite: NURS 430L.

NURS 430L Leadership for the RN Laboratory (1)
Exploration of the multiple nursing leadership roles at the baccalaureate level. Business and culture of health care. Roles include mentorship, change agents that inform, direct, and manage the organizational structure, and evaluation of multiple health care systems. Evaluation of legislative and organizational policies influencing health care trends. Prerequisites: Admission to the RN-BSN program, NURS 426, and NURS 428. Corequisite: NURS 430.

NURS 431 High Risk Obstetrics/ Pediatrics (3)
Exploration of advanced concepts in the care of the high-risk child-bearing family and for children with complex health problems from birth through adolescence. Emphasizes special needs and complications during the prenatal experience and altered functioning. Prerequisites: NURS 421/421L, and NURS 427/427L. Corequisites: NURS 431L, NURS 429/429L, NURS 449/449L, and NURS 450.

NURS 431L High Risk Obstetrics/ Pediatrics Laboratory (2)
Application of advanced concepts in the care of the high-risk child-bearing family and for children with complex health problems from birth through adolescence. Emphasizes special needs and complications during the prenatal experience and altered functioning. Prerequisites: NURS 421, NURS 421L, NURS 427, and NURS 427L. Corequisites: NURS 431, NURS 429, NURS 429L, NURS 449, NURS 449L, and NURS 450.

NURS 432 Capstone Leadership for the RN (4)
Contributions of the registered nurse to quality health care through lifelong learning and professional development of herself/himself and others, research data generation, clinical supervision and development of policy, and clinical practice guidelines. The registered nurse develops their professional practice in accordance with the health

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needs of the population/society and changing patterns of disease and illness. Prerequisites: NURS 300, NURS 320/320L, NURS 408, NURS 409, NURS 410/410L, NURS 418, NURS 422/422L, NURS 426, NURS 428, and NURS 430/430L.

NURS 449 Leadership (2)
Exploration of leadership and management theory utilized in development of characteristics of a nurse leader. The role of the professional nurse as a change agent in shaping health care for the future is explored. Prerequisites: NURS 421/421L, and NURS 427/427L. Corequisites: NURS 449L, NURS 450, NURS 429/429L, and NURS 431/431L.

NURS 449L Leadership Laboratory (1)
Application of leadership and management theory utilized in development of characteristics of a nurse leader. The focus is on the exploration and analysis of contemporary nursing practice and current evidence-based practice as the basis for nursing care in the clinical setting. Prerequisites: NURS 421, NURS 421L, NURS 427, and NURS 427L. Corequisites: NURS 449, NURS 429, NURS 429L, NURS 431, NURS 431L, and NURS 450.

NURS 450 Intensive Care Areas Specialty Practice Preparedness (3)
Overview of the dynamics of the collaborative and independent nature of nursing practice within critical care, perioperative, and emergency nursing. Commonalities of practice areas will be explored within the context of the nursing process. Includes recognizing and analyzing pertinent diagnostic data and physical and psychosocial assessment data; identifying common patient health problems and interventions; and determining patient outcomes. Prerequisite to the in-depth specialty practice courses.

NURS 459 Family/Maternal/Child Nursing (4)
Introduction to nursing care of the childbearing family. Emphasis is on growth and developmentally appropriate management of the health and illness related needs of the mother, newborn, and child within the family. Exploration of physiological, psycho-social, and pathophysiological changes of the population. Application of nursing process to gather and analyze data and formulate interventions with culturally diverse families. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 459L, NURS 472, and NURS 473/473L.

NURS 459L Family/Maternal/Child Nursing Clinical (3)
Application of the nursing care of the childbearing family. Emphasis on growth and development and management of the health and illness needs of the mother, newborn, and child within the family. Exploration of nursing care in Labor and Delivery, post-partum, newborn, and pediatrics will incorporate physiological, psycho-social, and pathophysiological changes of the population. Prerequisites:Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 459, NURS 472, NURS 473, and NURS 473L.

NURS 470 Capstone (2)
Application of nursing principles and skills in an area of health care delivery. Critical thinking, lifelong learning, nursing process, caring, collaboration, and health teaching and promotion are emphasized. Prerequisites: NURS 421/NURS 421L and NURS 427/427L. Corequisites: NURS 429/429L, NURS 431/431L and NURS 449/449L.

NURS 472 Professional Development II: Health Informatics (3)
Exploration of information systems in health care and nursing practice. Exploration of current trends and issues in using, designing, and implementing health care information systems, healthcare information management, decision support, andknowledge management applications.
Introduction of legal and ethical issues, management, and social networking tools in communicating health-related information. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 459/459L, and NURS 473/473L.

NURS 473 Acute and Chronic Illness II (4)
Application of critical thinking skills and the nursing process in caring for individuals in the acute care setting. Emphasis on disease pathophysiology, patient teaching, and continuity of care upon discharge. Exploration of coping mechanisms, adaptation, and implementation of health care strategies in acute illness. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 459/459L, NURS 472, and NURS 473L.

NURS 473L Acute and Chronic Illness II Clinical (3)
Application of theory to complete comprehensive assessments and plan care for patients in acute and critical care. Exploration of health problems in critical care, emergency, medical-surgical units, invasive procedure labs, renal dialysis, specialized healthcare teams, and other acute care clinical areas. Introduction of the high fidelity simulation lab. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 459, NURS 459L, NURS 472, and NURS 473.

NURS 480 Basic Concepts in Palliative Care (2)
Provides basic theory about the practice of hospice and palliative care with focus on the consequences of progressive, predictable disease, providing attention to the whole person and family, and using scientific practice in developing treatment for pain and symptoms. Explores assessment, advanced communication skills, responses to loss, advance care planning, symptom management, and cultural and ethical issues. Prerequisites: Prior RN degree and licensure, and current enrollment in the BSN program.

NURS 482 Professional Development III: The Professional Nurse (2)
Exploration of transitioning into professional nursing practice. Emphasis on scope of practice, delegation, professional development, and

licensure. Exploration of health care systems as they relate to quality improvement, patient outcomes, finance, and policy development. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 487/487L, NURS 490/490L, NURS 492, and NURS 493/493L.

NURS 487 Community and Population Nursing (3)
Exploration of theoretical basis for community and population health and the role of the nurse. Exploration of microsystems, applications of transitions of care, financing concepts in the community setting, and analysis of the health of populations. Emphasis on health promotion, disease prevention, using epidemiology, environmental health, health policy, aggregates, systems, populations, community assessment, and community interventions. Prerequisites:Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 482, NURS 487L, NURS 490/490L, NURS 492, and NURS 493/493L.

NURS 487L Community and Population Nursing Clinical (2)
Application of theory in practice with diverse populations and aggregates in the community to achieve an optimum level of wellness. Emphasis on health disparities, cultural diversity, social justice, and health laws and policies related to population vulnerability throughout the lifespan. Exploration of the continuum of outpatient care in home health and collaboration with community services. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 482, NURS 487, NURS 490, NURS 490L, NURS 492, NURS 493, and NURS 493L.

NURS 490 Nursing Leadership and Management (2)
Exploration of nurses functioning in leadership and management capacity and plans for entry into practice. Application of components of leadership to the delivery of care and the role of the nurse in shaping the future of health care. Examination of trends and issues impacting nursing and the future of health care delivery systems. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 482, NURS 487/487L, NURS 490L, NURS 492, and NURS 493/493L.

NURS 490L Nursing Leadership and Management Clinical (1)
Application of theory into practice while functioning in a leadership and management capacity. Clarification of short and long-term career goals and plans for other aspects of entry into practice. Development and evaluation of individual learning objectives throughout the clinical rotation. Application of theory in the role of a mentor with other nursing students. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 482, NURS 487, NURS 487L, NURS 490, NURS 492, NURS 493, and NURS 493L.

NURS 492 Pharmacology for Nurses II (2)
Application of concepts of clinical pharmacology including preparation for the NCLEX exam. Emphasis on major drug classifications, nursing considerations, and patient education. Exploration of ethical, legal, and economic factors. Prerequisites:Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 482, NURS 487/487L, NURS 490/490L, and NURS 493/493L.

NURS 493 Senior Capstone (1)
Synthesis of theoretical nursing concepts through the use of case studies, application exercises, and simulation activities. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 482, NURS 487/487L; NURS 490/490L, NURS 492, and NURS 493L.

NURS 493L Senior Capstone Clinical (3)
Synthesis of knowledge and skills learned in the Baccalaureate program. Refinement of nursing practice skills in a safe learning environment using guided clinical experiences. Prerequisites: Admission to the BSN program. Foundation courses required. See program sheet for details. Corequisites: NURS 482, NURS 487, NURS 487L, NURS 490, NURS 490L, NURS 492, and NURS 493.

NURS 495 Independent Study (1-4)

NURS 496 Topics (1-3)

NURS 500 Theoretical Foundations (3)
Focuses on the critical components of contemporary nursing knowledge, including concepts, statements, metaparadigms, philosophies, conceptual models, and theories. Evaluates the variety of ways to organize nursing knowledge and explore the implications of their application. Through the clinical application of the course concent, students examine the use of theory and nursing knowledge in professional environments.

NURS 501 Nursing Research Methods (3)
Provides an introduction to advanced research concepts and methodologies. It will explore the application of research to evidence-based practice as well as a broader scope of application to a variety of nursing research projects. Application of statistical concepts in data analysis and use of PASW computerized data analysis will assist the student to evaluate research findings and application to nursing practice. Prerequisite: Bachelor of Science in Nursing.

NURS 502 Health Information Systems (3)
Explores the use of information systems in health care and nursing practice. Examines current trends and issues in using, designing, and implementing health care information systems, healthcare information management, decision support and knowledge

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management applications in the context of challenges facing healthcare organizations today. Explores legal and ethical issues as related to the protection of the privacy, confidentiality, and security of information in health care environments, utility of a wide array of personal health information management and social networking tools in communicating health-related information. Prerequisite: Bachelor of Science in Nursing degree.

NURS 503 Organizational Leadership (3)
Utilizes leadership and management theory and application to develop skills or the understanding and implementation of change. Components of the course include leadership theory and models, change theory and models, project managment and systems theory, financial management, organizational culture, and continuous process improvement.

NURS 504 Health Policy (3)
Prepares students to analyze policy issues, enhance their political knowledge and skills, and prepare for leadership roles in health policy-making. Cultivates understanding of political and economic forces related to nursing and health care delivery. Develops skills in influencing policy decisions related to health care, strategic partnerships, lobbying, use of media, and working with communities in today's changing health care environment. Prerequisite: Bachelor of Science in Nursing.

NURS 505 Quality Assessment and Improvement in Health Care Settings (3)
Review of outcomes-based quality assessment and improvement methods. Focuses on techniques of measuring quality of care, customer satisfaction, and safety. Implementation of quality management programs, and creating a culture supporting adherence to best practices and standards.

NURS 525 Pathophysiologic Concepts (3)
Advanced concepts in pathophysiological process and disease/disorder management. For the advanced practice nurse. Includes evidenced-based practice in assessment, disease management, diagnostic testing and treatment of selected body systems and disease processes across the lifespan.

NURS 526 Pharmacology for Advanced Nurse Practitioners (3)
Major drug classifications and the nursing management required for drug therapy. Core drug knowledge (pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications and precautions, adverse effects, and drug interactions) presented. Patient variables (health status, lifespan and gender, lifestyle, diet, and habits, environment, and culture) and their use in accurate patient assessment in drug therapy presented. Emphasizes importance of nursing management in drug therapy (maximizing therapeutic effect, minimizing adverse effects, and patient and family education). Foundation knowledge of basic pharmacology necessary for advanced prescriptive authority in the State of Colorado. Prerequisite: Bachelor of Science in Nursing.

NURS 527 Advanced Health Assessment (3)
Focused and comprehensive health assessment of clients across the lifespan. Includes diverse populations, biological, psychological, sociological, spiritual, and cultural aspects. Diagnostic reasoning emphasized as the primary means of collecting and analyzing data from client history, physical examination, and diagnostic procedures. Prerequisite: Bachelor of Science in Nursing.

NURS 530 Chronic Illness Management (3)
Provides a framework for competency in chronic illness and disease which now accounts for a large percentage of the nation's health care costs. Introduction to the prevalence of chronic disease and its impact on the individual, family, community, and society is explored. Explores nursing's role in prevention and intervention of specific medical diseases, and psychosocial aspects of chronic illness and disability. Prerequisite: Bachelor of Science in Nursing.

NURS 535 Health Promotion and Disease Prevention (3)
Concentrates on the theories and principles involved in the planning and implementation of nursing interventions appropriate for health promotion and disease prevention with diverse populations across the life span. Focus is on wellness in children, adults and elderly emphasizing family-centered care that incorporates screening, teaching, and health counseling with strong health promotion focus across settings. Health promotion and disease prevention strategies to reduce health disparities with an emphasis on national health goals will be addressed. Prerequisite: Bachelor of Science in Nursing.

NURS 540 Teaching Strategies for the Nurse Educator (3)
Theories, principles, and application of evidence-based teaching strategies that promote proficiency in teaching and learning. Learning environment development that supports nursing student success across a variety of settings from clinical to classroom. Integration of didactic learning with an educational practicum. Prerequisite: Bachelor of Science in Nursing.

NURS 545 Curriculum Design/ Evaluation (3)
Functional approaches to curriculum design and educational programs in nursing. Philosophical foundations of nursing education and curriculum development. Models for curriculum design and development of educational program models with the context of organizational mission and philosophy, philosophical or theoretical frameworks, and desired learning outcomes and competencies. Prerequisite: Bachelor of Science in Nursing degree.

NURS 560 Nurse Educator Practicum (3)
Education of the nurse educator through the practicum experience that integrates knowledge from previous courses. Students will integrate theory in a reality context of the teaching role. Opportunities to participate in all aspects of the educator role, including academic settings, and direct care environments are provided.

Prerequisites: Satisfactory completion of Required Core Courses (15 hours); Nursing Education Cognate (15 hours).

NURS 575 Capstone Project (3)
Development of capstone project demonstrates synthesis of graduate work and establishes groundwork for future scholarship. Capstone project reflects the student's clinical practice setting with a selected population group. Culminates in a formal paper and presentation in an academic setting. Prerequisite: Bachelor of Science in Nursing degree.

NURS 580 Thesis (3)
Development of thesis. Synthesis of graduate work. Establishes groundwork for future scholarship. Topic chosen for thesis should reflect the student's nursing practice setting with a selected population group. Thesis project involves original research. Culminates in dissemination of findings in a formal paper to be submitted for publication. Prerequisite: Bachelor of Science in Nursing degree.

NURS 595 Independent Study (1-3)

NURS 596 Topics: (1-3)

NURS 600 Advanced Practice Nursing Issues (2)
Roles and responsibilities of the nurse practitioner in augmenting client health and health services. Examines the history of nurse practitioners, client relations, and legal and ethical considerations. Interdisciplinary teams, health policy formation and political strategies considered. Professional involvement and practice, leadership, collaboration and teamwork in various settings examined. Prerequisites: Bachelor of Science in Nursing, Master of Science in Nursing, or completion of 500-level coursework.

NURS 601 Primary Care of the Child/Adolescent (3)
Focuses on primary care of the child and adolescent, beginning with the newborn. Growth, nutrition, well client care and guidance, assessment, diagnosis and management of acute and chronic conditions in the client population. Culture and ethnic considerations, child development, family, environment theories and concepts integrated throughout the didactice and clinical components. Prerequisites: Bachelor of Science in Nursing, MSN or completion of 500-level coursework. Corerequisite: NURS 610.

NURS 602 Primary Care of the Adult (3)
Principles and issues relevant to Advance Practice Nursing in Primary Care. Emphasis on health care management of adult patients with stable chronic and/or multiple complex problems utilizing clinical relevant research and guidelines. Primary health care, including wellness counseling of healthy adults, management of acute and chronic conditions of adults, referral of conditions requiring management by other health professionals, and community implications related to the health of adults explored. Examines evidenced-based trends and issues in the health of adults. Explores health promotion research. Prerequisite: Bachelor of Science in Nursing, Master of Science in Nursing, or completion of 500-level coursework. Corerequisite: NURS 620.

NURS 603 Primary Care of the Elderly (3)
Primary care of older adults with complex geriatric conditions and issues impacting care across a variety of settings. Preparations to meet the medical, bio-psychosocial and functional needs for the aging person with acute and chronic illness through appropriate assessment, diagnostic and management activities. Prerequisite: Bachelor of Science in Nursing, Master of Science in Nursing, or completion of 500-level coursework. Corerequisite: NURS 630.

NURS 604 Primary Care of Rural and Vulnerable Populations (1)
Theoretical concepts of primary care in care of rural population groups. Explores unique aspects of advanced practice nursing role in rural care. Prerequisites: NURS 601, NURS 602, NURS 603, NURS 610, NURS 620, and NURS 630. Corequisite: NURS 640.

NURS 610 Clinical Practicum: Child/Adolescent (3)
Application of theoretical concepts of primary care in care of children and adolescents. Integration of health assessment, pathophysiology, pharmacology, health promotion and disease prevention, chronic and acute illness management in clinical practice as an advanced practice nurse. Prerequisite: Bachelor of Science in Nursing, Master of Science in Nursing, or completion of 500-level coursework. Corequisite: NURS 601.

NURS 620 Clinical Practicum: Adult (3)
Application of theoretical concepts of primary care of adults. Integration of health assessment, pathophysiology, pharmacology, health promotion and disease prevention, chronic and acute illness management in clinical practice. Prerequisite: Bachelor of Science in Nursing, Master of Science in Nursing, or completion of 500-level coursework. Corequisite: NURS 602.

NURS 625 Statistics for Health Sciences (3)
Advances knowledge and skills to effectively use biostatistics in research design and data analysis. Includes choosing correct statistical methods and study designs in nursing research and practice; descriptive statistics; common measures of disease frequency, probability and probability distributions; estimation and hypothesis testing, correlation, t-tests, analysis of variance, analysis section of research publications and use of statistical software for data analysis. Prerequisites: Bachelor of Science in Nursing, undergraduate statistics.

NURS 626 Epidemiology (3)
Explores epidemiological concepts and biostatistics as applied to public health problems. Advanced clinical nursing practice. Emphasizes principles and methods of epidemiologic investigation, appropriate summaries and displays of data. Use of classical statistical approaches in measuring health of the population. Explores understanding the causes of poor health, screening, developing interventions for disease prevention and control. Improving health and reducing health disparities.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

Translating evidence into practice and evaluating the impact of policies and programs. Includes dynamic behavior of disease, usage of rates, ratios and proportions, epidemiologic study designs for investigating associations between risk factors and disease outcomes. Criteria for causal inferences, legal and ethical issues. Application of epidemiology in health services, screening, genetics, and environment policy presented. Prerequisite: Bachelor of Science in Nursing, Master of Science in Nursing or completion of 500-level coursework.

NURS 630 Clinical Practicum: Elderly (3)
Application of theoretical concepts of primary care in care of elderly. Integration of health assessment, pathophysiology, pharmacology, health promotion and disease prevention, chronic and acute illness management in clinical practice. Prerequisite: Bachelor of Science in Nursing, Master of Science in Nursing or completion of 500-level coursework.

NURS 640 Clinical Practicum: Rural Health Care (2)
Application of theoretical concepts of primary care in care of rural population groups. Integration of health assessment, pathophysiology, pharmacology, health promotion and disease prevention, chronic and acute illness management in clinical practices. Explores unique aspects of advanced practice nursing role in rural health care. Prerequisites: Bachelor of Science in Nursing, Master of Science in Nursing or completion of 500-level coursework; NURS 601, NURS 602, NURS 603, NURS 610, NURS 620, NURS 630. Corequisite: NURS 604.

NURS 650 Family Nurse Practitioner Preceptorship (6)
Focuses in-depth on the role of an FNP in the client-care setting with selected populations. Experience designed to integrate and synthesize preceding clinical and didactic course knowledge and skills, development of clinical management, leadership and interdisciplinary collaborative practice skills at an advanced competency level. The roles of an advanced practice nurse with an approved preceptor/mentor is practiced. Prerequisites: Bachelor of Science in Nursing, Master of Science in Nursing or completion of 500-level coursework; NURS 601, NURS 602, NURS 603, NURS 610, NURS 620, NURS 630, NURS 640.

NURS 660 Transition into Advanced Practice Nursing (2)
Focuses on concepts of scope of practice, professional growth, role development, theory guided and evidenced based practice for the advanced practice nurse. Professional involvement and practice, leadership, teamwork, collaboration, legal, ethical, reimbursement, and role acquisition issues for advanced practice nurses. Prerequisites: Bachelor of Science in Nursing, Master of Science in Nursing or completion of 500-level coursework; NURS 650.

NURS 700 Evidence-Based Practice (3)
Preparations to discover, examine, and evaluate knowledge, theories, and creative approaches to health care. Skills to: a) identify research questions in practices; b) critically evaluate existing practice in the light of research findings; and c) develop strategies to incorporate research findings into the clinical setting. Prerequisite: Bachelor of Science in Nursing, Master of Science in Nursing or completion of 500-level coursework; NURS 650.

NURS 750 Application of EBP I (3)
Focuses on initial development of scholarly project proposal that demonstrates synthesis of doctoral work and lays the ground work for future scholarship. Emphasis on use of evidence to improve either practice or patient outcomes. Scholarly project reflects clinical immersion in a practice setting with a selected population group. Bachelor of Science in Nursing, Master of Science in Nursing or completion of 500-level coursework; NURS 650, NURS 700.

NURS 760 Application of EBP II (3)
Culmination of scholarly project includes translation of research into practice and the dissemination and integration of new knowledge into clinical practice as an advanced practice nurse. Evidence is generated through a practice setting to guide improvements in practice and outcomes of care. Prerequisites: Bachelor of Science in Nursing, Master of Science in Nursing, or completion of 500-level coursework; NURS 750.

NURS 795 Independent Study (1-3)

OFFICE TECHNOLOGY: ADMINISTRATIVE (OFAD)

OFAD 103 Keyboarding (1)
For students who have minimal (less than 30 wpm) or no keyboarding skills. Introduces the touch method of keyboarding Emphasizes learning the alpha numeric keyboard, proper technique, and speed control.

OFAD 147 Medical Terminology (4)
Basic medical terminology as applied to major systems of the body and related diseases. Includes special applications related to medical practice with emphasis on spelling.

OFAD 196 Topics (1-3)

OFAD 244 Legal Office Procedures (3)
Procedures found in legal offices either in the private or public sectors. Fundamental office procedures found in both general and specialized law offices. Simulates a typical legal office with the tasks and responsibilities performed in a legal office environment and shows how these tasks relate to the court system.

OFAD 248 Coding and Insurance Billing (3)
Introduces coding with an ultimate goal to present a clear picture of medical procedures and services performed (CPT codes), correlating the diagnosis, symptom, complaint or condition (ICD-9 codes), thus establishing the medical necessity required for third-party reimbursement. Covers how to abstract information from medical records and code for insurance billing purposes. Focuses on health insurance claim form CMS-1500 insurance billing requirements for private insurance and

managed care, Medicaid, Medicare, and Worker's Compensation. Includes credit and collection practices as well as tracking reimbursement.

OFAD 253 Word Processing II (3)
Lecture/lab provides instruction in intermediate to advanced word processing techniques. Continuation of OFAD 153 and provides more hands-on experience with the more advanced features of word processing. Reviews and expands word processing knowledge to increase proficiency and includes merging, sorting, tables, forms, outlines, tables of contents, graphics, charts, newsletters, document enhancements, reports, styles, macros, templates, and wizards. Prerequisite: OFAD 153.

OFAD 291 Service Learning (3-12)
Practical use of educational training through joint supervision of a participating business organization and a designated faculty member. Provides opportunity to supplement course work with practical work experience either on a paid or volunteer basis. Work experience must be related to educational program/ occupational objectives and requires designated faculty member approval. Provides opportunity of service to the community utilizing knowledge and skills acquired. Prerequisite: final semester or sophomore standing.

OFAD 293 Cooperative Education (3-12)
Practical uses of educational training through the joint supervision of a participating employer and a designated faculty member. Provides the opportunity to supplement course work with practical work experience related to educational program and occupational objectives. Prerequisite: sophomore standing.

OFAD 295 Independent Study (1-3)

OFAD 296 Topics (1-3)

PHILOSOPHY (PHIL)

✓ PHIL 105 Critical Thinking-GTAH3 (3)
An introduction to the basic skill of critical reading, writing, and thinking needed for the intelligent, responsible, and ethical construction of one's worldview, conduct of one's life, and execution of one's civic duties. Topics include: argument identification, analysis, and construction; avoidance of common fallacies of reasoning; common deceptive and manipulative uses of language; writing clear and convincing argumentative essays.

✓ PHIL 110 Introduction to Philosophy-GTAH3 (3)
Includes an orientation to the discipline's concerns, branches, major schools of thought, and its relationship to other disciplines; a selection of readings from philosophers of all historical periods concerning major philosophical issues; practice in the process of philosophical reasoning, the critical analysis of philosophical writings, and the most basic rules of logic.

✓ PHIL 120 Ethics-GTAH3 (3)
Introduction to theoretical and applied Ethics. Major moral philosophers and moral theories surveyed. A general approach to moral reasoning developed. Development applied to discussion of recent writings on such issues as euthanasia, abortion, war, capital punishment, affirmative action, etc.

✓ PHIL 130 Philosophy of Religion-GTAH3 (3)
Exploration of fundamental issues regarding religion and examination of the principles of inquiry involved in dealing with such issues philosophically. Issues include the concept of God, arguments for the existence of God, the relationship between faith and reason, the validity of religious experience, pluralism in world religions, etc.

PHIL 150 Philosophical Forum (3)
Engagement with, and confrontation of, issues that challenge the community of Grand Junction and the Western Slope. Forum for speakers with varying positions and perspectives on economic, environmental, legal, social and cultural controversies. The deeper philosophical implications will remain in the forefront of the discussion.

PHIL 275 Introduction To Logic (3)
Forms of reasoning, valid versus fallacious inferences, strong versus weak arguments. Designed to increase the ability to reason clearly and correctly and follow and critically evaluate the reasoning of others.

PHIL 296 Topics (1-3)

PHIL 340 The Examined Life (3)
Introduction to practical philosophy. The application of philosophy to one's life in order to work toward the Socratic goal of living well. Topics covered include: Socratic thought, wisdom, Epicureanism, Stoicism, mindfulness, limiting beliefs, acceptance of reality, the self, creativity.

PHIL 350 The Roots of Western Thought (3)
Examination of the development of Western philosophical thought from its inception with the ancient Hellenes, through the Hellenistic and Medieval periods. Philosophical methods and problems will be discussed, including (but not limited to): ontology, metaphysics, political and social thought, death and the afterlife, the influence of philosophy on Christianity, the nature of the universe, human nature, the development of science and logic. Philosophers covered will include: The Presocratics, Socrates, Plato, Aristotle, Augustine, Aquinas, and others.

PHIL 395 Independent Study (1-3)

PHIL 396 Topics (1-3)

PHIL 410 Major Thinker (3)
In-depth study of one or two important philosophers. Attention paid to their historical, cultural, scientific, and philosophical contexts. Examination of relevant portions of the philosophers' works, arguments, objections, and responses. Additional emphasis on the place of the thinkers in the "great conversation" that is philosophy via related primary and secondary texts.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

PHIL 420 Major Works (3)
In-depth study of the major and classic philosophical works of a philosopher or philosophical school. Emphasis on the historical, cultural, scientific, and philosophic contexts of the works. Examination of texts as they are situated in the philosopher's or school's opus, along with important influential writings preceding and following works influenced by these texts.

PHIL 430 Major Issues (3)
In-depth study of major and classic philosophical issues, with attention to their historical development, major contributors, and seminal texts. Exploration of the important works surrounding the issue and important objections and responses, with a view to developing individual positions.

PHIL 495 Independent Study (1-3)

PHIL 496 Topics (1-3)

PHYSICS (PHYS)

✓ **PHYS 100 Concepts of Physics-GTSC2 (3)**
Introduction to physics. Emphasis on basic conceptual aspects described in everyday language. Elementary mathematics introduced when necessary. Survey of topics such as Newtonian mechanics, heat and energy, electricity and magnetism, light, relativity and quantum theory. The course is designed for majors outside of the sciences.

✓ **PHYS 101 Elementary Astronomy-GTSC2 (3)**
Introduction to astronomy. Survey of topics such as observational astronomy, the solar system, stellar astronomy, galaxies and cosmology. Emphasis on basic conceptual aspects of astronomy. Minimal use of elementary mathematics such as basic arithmetic, fractions, square roots and powers. The course is designed for students in all majors.

✓ **PHYS 105 Physics by Inquiry-GTSC1 (2)**
✓ **PHYS 105L Physics by Inquiry Laboratory-GTSC1 (1)**
Laboratory-based introduction to physics and the physical sciences. Starting from their own observations, students develop basic physical concepts, use and interpret different forms of scientific representations, and construct explanatory models with predictive capabilities. Topics include properties of matter, heat and temperature, magnets, electric circuits, motion, and astronomy. Recommended for prospective K-12 teachers.

✓ **PHYS 111 General Physics-GTSC1 (4)**
✓ **PHYS 111L General Physics Laboratory-GTSC1 (1)**
Algebra-based introduction to classical mechanics and thermodynamics. Includes mechanics, energy and momentum conservation, thermodynamics and statistical mechanics. Extensive use of high school level algebra and trigonometry, mastery of these subjects required. PHYS 111, 111L is a prerequisite for PHYS 112, 112L. Four lectures and one two-hour laboratory per week.

✓ **PHYS 112 General Physics-GTSC1 (4)**
✓ **PHYS 112L General Physics Laboratory-GTSC1 (1)**
Algebra-based introduction to classical electromagnetism, optics and modern physics. Detailed coverage of electrostatics, electric circuits, magnetism, electromagnetic waves, geometrical optics and wave optics. Topics from modern and atomic physics. Extensive use of algebra and trigonometry. Prerequisites: PHYS 111/111L, or PHYS 131/131L, with a grade of C or higher.

✓ **PHYS 131 Fundamental Mechanics-GTSC1 (4)**
✓ **PHYS 131L Fundamental Mechanics Laboratory-GTSC1 (1)**
Calculus-based introduction to classical mechanics. Detailed coverage of the kinematics and dynamics of linear and rotational motion using Newton's Laws, momentum and energy conservation. The mathematics of calculus and vectors is used throughout. For majors in the sciences and engineering. Prerequisite: MATH 151 or MATH 135 (either may be taken concurrently).

✓ **PHYS 132 Electromagnetism and Optics-GTSC1 (4)**
✓ **PHYS 132L Electromagnetism and Optics Laboratory-GTSC1 (1)**
Calculus-based introduction to classical electromagnetism and optics. Detailed coverage of electrostatics, electric circuits, magnetism, electromagnetic waves, geometrical optics and wave optics. The mathematics of calculus and vectors is used throughout. For majors in the sciences and engineering. Requires a mastery of the foundations of classical mechanics as covered in PHYS 131. Prerequisites: PHYS 131/131L, and MATH 152 or MATH 136 (either may be taken concurrently). A grade of C or higher in PHYS 131/131L is required.

PHYS 196 Topics (1-3)

PHYS 230 Intermediate Dynamics (3)
Intermediate treatment of the dynamics of physical systems not covered in Fundamental Mechanics sequence. Includes fluid dynamics, classical waves and vibrations, thermodynamics, and relativistic kinematics and dynamics. Prerequisites: PHYS 132, 132L, and MATH 253 (may be taken concurrently).

PHYS 231 Modern Physics (3)
Quantum theory in the examination of blackbody radiation, the photoelectric effect, and energy quantization of atoms. The Schrodinger wave equation used to analyze simple quantum systems. Applications drawn from atomic and molecular physics, solid-state physics, nuclear and high-energy physics, and astrophysics. Prerequisites: PHYS 132, 132L, and MATH 253 (may be taken concurrently).

PHYS 251 Electronics for Scientists (3)
This laboratory-based course is an introduction to electric circuits and electronic instrumentation for scientists. The course will emphasize a practical approach, with students learning about electronic devices and how they work by building working circuits. Topics explored include passive circuits with resistors and capacitors, including applications in electric filtering; diodes; transistors; op-amps; timing circuits;

feedback and amplification; and digital circuits. Prerequisites: PHYS 132 or PHYS 112.

PHYS 252 Intermediate Laboratory (2)
Students will perform experiments in optics, acoustics, and modern physics. Experiments will include measuring the speed of light, measuring the wavelength of atomic discharge lines, X-ray diffraction, and measuring h/e among others. Emphasis will be on experimental design, use of modern instrumentation, preparation of lab reports, and data analysis. Prerequisite: PHYS 231 (may be taken concurrently).

PHYS 296 Topics (1-3)

PHYS 300 New Directions in Science (3)
A survey of recent developments in science. This course is open to qualified students in liberal arts as well as the sciences. Faculty from various disciplines will participate. Topics will be drawn from astronomy, biology, chemistry, geology, physics, engineering, and applied mathematics. Permission of instructor required.

PHYS 301 Introduction to Space Science (3)
The history and technology of space and space exploration. Designed for all non-science majors, particularly prospective K-12 teachers. Topics include: the solar system, space environments, space travel, satellite communication and design. Prerequisites: junior or senior status, or consent of instructor.

PHYS 311 Electromagnetic Theory I (3)
A mature study of electromagnetic fields. Electrostatics and magnetostatics presented. Special techniques, including multipole expansion of fields, analyzed. Electrodynamics introduced leading to Maxwell's equations. Prerequisites: PHYS 132/132L, and MATH 260 or MATH 236.

PHYS 312 Electromagnetic Theory II (3)
A continuation of PHYS 311. Electromagnetic waves were studied. Wave propagation in conducting and nonconducting media is examined, along with dispersion phenomena. Waveguides are examined. Electromagnetic field radiation is studied, both for point charges and for arbitrary charge distributions. The course concludes with a reformulation of electromagnetism in the language of special relativity. Prerequisite: PHYS 311.

PHYS 321 Quantum Theory I (3)
Quantum physics foundation. Includes quantum states, measurements, and time evolution using Dirac formalism for discrete and continuous systems. Connection between Dirac formalism and wave mechanics established and Schrodinger equation solved in various context. Includes particles in piecewise square potentials, tunneling, the harmonic oscillator, angular momentum, and the hydrogen atom. Introduces linear algebra for describing quantum physics and uses techniques for solving differential equations. Prerequisite: PHYS 231, and MATH 260 or MATH 236.

PHYS 331 Advanced Laboratory I (2)
A course in experiment design and technique. Laboratory investigations provide experience in instrumental methods, planning of laboratory experiments, data analysis, preparation of reports according to professional standards, and training in the use of computers for data acquisition and processing. The experiments to be performed are selected from electromagnetism, atomic, nuclear, and solid-state physics. Prerequisite: PHYS 252.

PHYS 342 Advanced Dynamics (3)
In-depth survey of classical mechanics, includes advanced treatment of Newtonian dynamics, conservation laws, gravitation, and the Lagrangian and Hamiltonian formulations of dynamics. Topics may include central force motion, systems of particles, non-inertial reference frames, rigid bodies, oscillating systems, couple oscillations, and waves on a string. Prerequisites: PHYS 230, and MATH 260 or MATH 236.

PHYS 352 History and Philosophy of Physics (3)
Material varies from year-to-year. The course addresses problems in the interpretation and development of physics. Case studies of crucial experiments are analyzed. The interaction of physics with other philosophical and cultural pursuits is discussed. Prerequisite: one year of physics or consent of instructor.

PHYS 362 Statistical and Thermal Physics (3)
Study of the physics of bulk matter. Fundamental principles of quantum mechanics, statistical methods employed to explain macroscopic laws of thermodynamics to make detailed predictions about the large-scale behavior of solids, liquids, and gases. Applications: specific heat of solids, thermal radiation, magnetic susceptibilities, stellar equilibrium, and chemical reactions. Prerequisites: PHYS 230 or CHEM 321; and MATH 236 or MATH 260.

PHYS 395 Independent Study (1-3)

PHYS 396 Topics (1-3)

PHYS 422 Quantum Theory II (3)
Continuation of PHYS 321. Central forces, complete derivation of hydrogen atom energy levels and eigenstates. Perturbation theory and other approximately techniques. Other selected topics include: multiple quantum systems, scattering, quantum foundations. Prerequisite: PHYS 321.

PHYS 432 Nuclear and High-Energy Physics (3)
An introduction to the structure and interactions of nuclear and subnuclear particles. Topics include a survey of the intrinsic properties of nuclei, descriptions of various nuclear models, studies of radioactivity and nuclear reactions, and an overview of the technologies of high-energy accelerators and detectors. The course concludes with an introduction to the properties and structures of elementary particles and discussions of current developments in unified theories of force. Prerequisite: PHYS 322.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

PHYS 441 Solid State Physics (3)
The structure and properties of solids. This course is a study of the crystalline state of matter, including crystal classifications, vibrational specific heats, electronic structures and conductivities, cohesive energies, magnetic susceptibility, and optical properties. Prerequisite: PHYS 321.

PHYS 471 Computational Physics I (3)
Foundation covering application of computational techniques to solving physical problems. Numerical integration, differentiation, and matrix methods covered. Techniques of solving various regular and partial differential equations studied. Application of discretizing numerical solutions for physical problem stressed. Turning analytic problems into solvable computational schemes. Data analysis and visualization covered. Familiarity with any programming language is required. For any Science, Engineering or Mathematics major. Prerequisites: MATH 260 or MATH 236, and PHYS 311 or PHYS 321 or PHYS 342 or instructor permission.

PHYS 472 Computational Physics II (3)
A continuation of PHYS 471. Advanced topics in solving partial differential equations and simulating physical systems using modern parallel computing covered. MPI, Open MP, and their applications to physical phenomenon on Linux workstations covered. Introduction to translating analytical problems to parallel computational problems Prerequisite: PHYS 471.

PHYS 473 Modern Optics (3)
Modern principles and applications of optics. Optical models including ray and wave optics presented. Laws of reflection and refraction studied within the context of both ray and wave optics. Reflectivity and transmissivity analyzed. Superposition and wave interference discussed. Diffraction theory used in a number of applications. Concludes with an introduction to lasers and quantum optics. Prerequisite: PHYS 311.

PHYS 482 Senior Research (1)
An individual research project, supervised by a faculty advisor. The project may be selected from experimental or theoretical topics. The research concludes with a formal report written in accordance with The American Institute of Physics Style Manual. This course is normally taken twice in the senior year.

PHYS 487 Structured Research (1-3)
Physics research under the direct guidance of a faculty member. Designed for advanced junior and senior level students. Prerequisite: permission of instructor.

PHYS 494 Physics Seminar (1)
A forum for topical physics. In this seminar, faculty and students of physics participate in both informal discussions and formal oral presentations of selected topics of scientific interest, including significant current advances and crucial historical developments. The course may be repeated for a maximum of four semester hours of credit. Prerequisite: upper division standing and consent of instructor.

PHYS 495 Independent Study (1-3)

PHYS 496 Topics (1-3)

PHYS 596 Topics: (1-3)

POLITICAL SCIENCE (POLS)

✓ POLS 101 American Government-GTSS1 (3)
Structures and functions of the American political system and the constitutional development of federalism and separation of powers. Also, citizen participation and influence in politics, the congress, presidency and the supreme court, and public policy including civil rights and liberties.

POLS 151 Introduction to Political Ideas (3)
Introduction to the major theories of human political organization and ideas that frame those approaches. Emphasis on theories of democracy, authoritarianism, liberalism, conservatism and contemporary ideologies of liberation (feminism, environmentalism and race).

POLS 196 Topics: (1-3)

POLS 201 Introduction to Political Inquiry (3)
Introduction to major tools of investigation in the study of politics. Examination of modern scientific research design and methods. Additional emphasis on discipline-specific skills in critical thinking, information literacy, writing and citation mechanics, and oral communication..

POLS 236 State and Local Government (3)
Theories of state formation and constitutional development, city charters, county government, and intergovernmental relations with emphasis on Colorado.

✓ POLS 261 Comparative Politics-GTSS1 (3)
Introduction to conceptual models and approaches utilized in the comparative study of nations and their politics. Application of these theories to selected democratic, communist, and developing political systems.

POLS 270 World Politics (3)
Introduction to structures, processes, and behaviors shaping world politics. Emphasis on states and their interactions as well as non-state actors and cultural, economic, and environmental forces shaping an emerging world community.

POLS 324 The Legislative Process (3)
A study of the legislative process emphasizing the U.S. Congress. Attention will be given to the development of legislative systems, the operation of legislatures, the election of legislators, and a comparison with legislatures in other national states. Prerequisites: POLS 101 or consent of instructor.

POLS 325 The American Presidency (3)
A study of the American chief executive, emphasizing the historical development of the office, the various functions of the modern chief executive and a brief

comparison with the executive officer of other national states.

POLS 328 The American Court System (3)
The American court system; local, state, and national, including consideration of the impact of prosecutors, defense personnel, judges, and other factors on court decisions and the criminal justice system. Prerequisites: POLS 101 or CRMJ 201.

POLS 342 Public Administration (3)
Historical development of public administration including organizational structure and theory, management, personnel administration, fiscal administration, and administrative responsibility.

POLS 351 Public and Elite Political Behavior (3)
Behavior of elected officials and the public in American politics. Achievement of power and how actions are evaluated via public opinion and voting. Role of media in American politics explored. Prerequisite: POLS 101.

POLS 352 Religion and Politics (3)
The interactions of religion and politics in the United States, several liberal democracies and within international relations.

POLS 353 Politics of Human and Natural Resources (3)
Study of politics and public policy surrounding natural resource allocation, preservation, development and consumption by human social systems. Emphasis on challenges of public policy formation and implementation in areas of land, water, energy, minerals, food and habitat at domestic and global levels.

POLS 354 Political Geography (3)
Exploration of ways in which physical landscapes shape political attitudes, ideas, and institutions. Emphasis on key concepts of place, mapping, borders, territory, nationalism, and ecological and social impact of natural settings.

POLS 356 Indigenous Politics (3)
Study of interactions between the state and various indigenous peoples around the world. Internal political structure and practice of selected indigenous groups and the role of indigenous nations in global politics.

POLS 366 Government and Politics of Asia (3)
Study of political systems of China, Japan, Korea, India, and Indonesia. Emphasizes political development, sources, processes, and evaluation of policy making, and contemporary challenges facing these countries.

POLS 372 Peace and Conflict Studies (3)
Interdisciplinary study of nature and causes of conflict, conflict resolution, and foundations of justice and peace. Analyzes historical and contemporary conflicts, both civil and international, and examines how evidence and theory are used to understand peace and conflict.

POLS 373 Global Politics of Women and Gender (3)
Analysis of women and gender in global security and the global political economy. Topics include violence and war, transnational activism, migration, development, human rights, sex work, and domestic work. Examines contemporary case studies, how evidence and theory are used to explain the gendered nature of global security and economic systems.

POLS 395 Independent Study (1-3)

POLS 396 Topics (1-3)

POLS 412 Constitutional Law (3)
An analysis of American constitutional theory as articulated by the U. S. Supreme Court. Specific topics include the nature of judicial review, the powers of the President and Congress, federalism, the regulation of commerce and the development of substantive due process. Prerequisite: POLS 101 or consent of instructor.

POLS 452 Political Theory: Classical and Medieval (3)
POLS 453 Political Theory: Modern (3)
Study of the development of political theory in the Western tradition. Emphasizes the teaching of main thinkers: Socrates, Plato, Aristotle, Augustine, Aquinas, More, Machiavelli, Hobbes, Locke, Rousseau, Mill, and Marx. Develops ideas in relation to historical and cultural contexts, textual consistency, and the evolving tradition of political discourse in Western civilization.

POLS 462 Public Policy: Theory and Practice (3)
Overview of theory and practice of public policy making and implementation. Examination of participants and stages of public policy making. Analysis of success/failure of controversial public policies. Topics may include healthcare policy, drug policy and welfare.

POLS 471 Politics of Global Governance (3)
Analysis of management of world politics and economics by networks of states, international and regional organizations, and non-state participants. Includes human and environmental security, human rights, global health, organized crime, global political economy, and development. Examines successful and unsuccessful problem management in a globalized world. Prerequisite: POLS 270.

POLS 472 International Political Economy (3)
Analysis of origins, evolution, and trajectory of global political economy. Includes international regulation, trade, finance, and monetary systems, as well as development, foreign aid, migration, organized crime, and resource extraction. Explores theory and evidence used to explain global economic developments. Prerequisite: POLS 270.

POLS 475 American Foreign and National Security Policy (3)
American foreign and national security policy with emphasis on 1945 to the present and beyond. Foreign and domestic factors shaping policy, the mechanisms and dynamics of policy making, the role of perception and

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motives underlying decision and action, and case studies of historical crises and contemporary debates are examined.

POLS 482 International Relations Theory (3)
Study of the major theoretical approaches to international relations and global politics. Special emphasis placed on foundational concepts such as the state, sovereignty, governance, borders, and emerging issues of identity, non-state participants, and human security. Prerequisite: POLS 270.

POLS 488 Environmental Politics and Policy (3)
An introduction to the political issues and problems associated with patterns of socio-economic growth and its environmental impact at both domestic and global levels of analysis.

POLS 490 Senior Seminar for Political Science (3)
Arranged tutorials and seminars with political science faculty and students, design and execution of a research project, and submission of a senior thesis. Prerequisites: POLS 201 and senior standing.

POLS 495 Independent Study (1-3)

POLS 496 Topics (1-3)

POLS 499 Internship (1-15)
May be performed in areas relating to Political Science, such as civic, political, or legal. Internships will be conducted in Mesa County, the Denver legislature, or in Washington, D.C. Prerequisites: junior or senior standing.

POLS 501 Theories of Political Science (3)
Graduate-level introduction to theoretical approaches in political science. Topics will include basic issues in the philosophy of social science, as well as theoretical frameworks that cut across the sub-fields of the discipline: rational choice, social constructivism, institutionalism, Marxism, feminism, and post-structuralism. Approaches unique to the three major subfields of comparative politics, international relations, and political philosophy will also be covered. Prerequisite: Admission into Social Studies Graduate Certificate Program.

POLS 505 American Government (3)
Graduate-level introduction to the foundations of American government. The course will cover major readings and theories in American government. Topics include American political development, institutions (Congress, presidency, judiciary), political behavior (public opinion,voting and elections, political parties and interest groups), and public policy. Prerequisite: Admission into Social Sciences Graduate Certificate Program.

PROCESS TECHNOLOGY (PROS)

PROS 100 Introduction to Process Technology (3)
Provides an overview or introduction into the field of Process Operations within the process industry. The course will introduce the roles and responsibilities of process technicians, the environment in which they work, and the equipment and systems in which they operate.

PROS 117 Electronics I (3)
Fundamentals of practical and theoretical DC and AC circuits. Application of basic entry skills and analysis/verification of theoretical results. Introduces the basic skills required by many careers in electronics and related fields. Operations and applications of basic DC and AC circuits consisting of resistors, capacitors, inductors, transformers and diodes, and introducing basic digital concepts. Emphasis on common test instruments in troubleshooting, working on real-world and applicable projects. Lecture/lab format.

PROS 118 Electronics 2 (3)
Advanced DC, AC and digital circuitry. Analysis and verification of theoretical results with practical applications. Builds on PROS 117 Electronics 1 and covers advanced concepts of DC and AC circuits. Includes expanded treatment of power supplies, dual-supply rectifier circuits, and Zener diode, voltage regulators. Includes digital concepts. Emphasis on common test instruments in troubleshooting, working on real-world projects. Lecture/lab format. Prerequisite: PROS 117.

PROS 120 Process Technology I: Equipment (4)
Provides an overview or introduction into the field of equipment within the process industry. This course will introduce many process industry-related equipment concepts including purpose, components, operation, and the Process Technician's role for operating and troubleshooting the equipment.

PROS 195 Independent Study (1-4)

PROS 196 Topics: (1-3)

PROS 220 Process Technology III: Operations (4)
Provides an introduction to the field of operations within the process industry. Students will use existing knowledge of equipment, systems, and instrumentation to understand the operation of an entire unit. Students study concepts related to commissioning, normal startup, normal operations, normal shutdown, turnarounds, and abnormal situations, as well as the Process Technician's role in performing the tasks associated with these concepts within an operating unit.

PROS 230 Quality in Process Technology (3)
Provides an introduction to the field of Quality within the Process Industry. This course will introduce many process industry-related quality concepts including operating consistency, continuous improvement, plant economics, team skills and statistical process control (SPC).

PROS 290 Certification: (1)
Capstone certification preparation specifically addressing each emphasis and associated certifications. Addresses Certified Electronics Technician (CET) program and other certifications.

PROS 292 Capstone (4)
Knowledge to articulate the tactical planning functions performed within field projects. Access and apply the

various tactical planning tools and data elements to supporting documentation including troubleshooting. Economic principles in costing, value, capital investment, profitability and inventory.

PSYCHOLOGY (PSYC)

✓ PSYC 150 General Psychology-GTSS3 (3)
Examines the fundamental principles of psychology.

PSYC 201 Orientation to the Psychology Major (3)
Foundations for further study in psychology. Education and career planning. Basic information competence and writing skills, including APA writing format. Basic descriptive statistics, data reporting and graphic representation. Importance of research. Applying to graduate school. Prerequisites: Declared psychology major, PSYC 150 and ENGL 112.

PSYC 202 APA Style of Writing for Psychology Minors (1)
APA writing format as foundation for further study in the psychology minor. Not intended for psychology majors. Prerequisites: PSYC 150, ENGL 112, and declared minor in psychology.

PSYC 216 Research Methods in Psychology (3)
PSYC 216L Research Methods in Psychology Laboratory (1)
Designing, conducting, and reporting psychological investigations. Experimental, non-experimental, and quasi-experimental methods examined. Research project and presentation of results in APA style. Prerequisites: PSYC 150, STAT 215, and PSYC 201. Corequisite: PSYC 216L.

✓ PSYC 233 Human Growth and Development-GTSS3 (3)
Developmental principles, ages and stages of the life span, and adjustment techniques. Not intended for behavioral science majors.

PSYC 296 Topics (1-3)

PSYC 300 Health Psychology (3)
Health and psychology are intertwined in a variety of ways. This course examines what it means to be healthy and look at the connection between behavior and both physical health and illness and mental health and illness. Prerequisite: PSYC 150 or PSYC 233.

PSYC 310 Child Psychology (3)
A study of the principles of human development and psychology from conception to puberty. Prerequisites: PSYC 150.

PSYC 314 Psychology Of Learning (3)
Classic and modern explanations of the phenomena of learning in both lower animals and humans. Classical and operant conditioning covered in detail. Prerequisites: Junior or senior status and PSYC 150.

PSYC 320 Social Psychology (3)
Social influences upon behavior with consideration given to topics such as: social perception, attitude formation and change, communication, and leadership. Prerequisites: PSYC 150.

✓ PSYC 330 Psychology of Adolescents and Emerging Adulthood (3)
Study of principles of human development (biological, cognitive, and social/emotional) from puberty through emerging adulthood. Prerequisite: PSYC 150.

PSYC 335 Psychology of Women (3)
A brief account of the role of women in mythology and history will be followed by coverage of women's heritage in psychology. Then gender specific aspects of physical, psychological and social development will be covered. Current areas of interest will be included, e.g., communication, work related issues, relationships. Prerequisite: PSYC 150.

PSYC 340 Abnormal Psychology (3)
Concepts related to psychopathology and personality disorders including functional causation, general psychological theory, and behavior deviation patterns. Prerequisite: PSYC 150, or consent of instructor.

PSYC 350 Psychology Of Adulthood (3)
Study of principles of human development (biological, cognitive, and social/emotional) from the latter part of young adulthood through late adulthood. Prerequisite: PSYC 150.

PSYC 370 Cross-Cultural Psychology (3)
Survey of theory and methods in cross-cultural psychology. Prerequisite: PSYC 150.

PSYC 395 Independent Study (1-3)

PSYC 396 Topics (1-3)

PSYC 400 Psychological Testing (3)
Theory, problems, methods, and content of psychological measurement, including concepts of the purpose of testing, test administration and scoring, standardization, reliability, validity test evaluation, and a survey of the major tests used in educational and psychological testing. Prerequisites: PSYC 150 and STAT 215.

PSYC 401 Sport Psychology (3)
Introduction to theories and research in Sport Psychology. Includes aggression and violence in sport, psychological characteristics of participants, sexual identity and motivation. Prerequisite: PSYC 150.

PSYC 410 Drugs and Human Behavior (3)
Study of pharmacological effects and behavioral consequences of self-administered depressants, stimulants, and euphoriants, of marijuana, alcohol and tobacco, and of medicines. Prevention of drug-related problems is considered briefly. Prerequisite: Junior or Senior standing.

PSYC 411 Human Sexuality (3)
Study of the biological, psychological, and social bases and manifestations of human sexual behavior. Includes theory, research and diversity in sexuality, the biology of sex, gender development, sexual diseases, deviancy and coercion. Prerequisites: PSYC 150, STAT 215, and PSYC 216/216L.

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PSYC 412 Industrial and Organizational Psychology (3)
Psychological principles applied to formal, productive organizations such as businesses, governments, and schools. Personnel selection, placement, training, evaluation, motivation to work, job satisfaction, and morale are examined. Counts as a management course for BBA candidates. Prerequisites: PSYC 150, or consent of instructor.

PSYC 414 History of Psychology (3)
Systems and theories of modern psychology and the development of scientific psychology since 1879. Prerequisites: PSYC 150, and good standing as a junior or above psychology major or permission of instructor.

PSYC 416 Memory And Cognition (3)
Study of the mental processes that underlie our abilities to recognize stimuli, think, remember, learn language, and solve problems. Current research in each of these areas will be discussed. Includes a research paper written in APA style. Prerequisite: PSYC 150.

PSYC 420 Personality (3)
Examination of personality psychology from the time of Freud through the present. Theories and various approaches to understanding the development and functioning of both the general and the unique in personality are emphasized. Prerequisite: PSYC 216, recommend PSYC 400.

PSYC 422 Sensation and Perception (3)
Study of the human senses, especially vision and hearing, and of people's meaningful organization of sensory information. Prerequisites: PSYC 150, or consent of instructor.

PSYC 425 Forensic Psychology (3)
Introduction to the production and application of psychological knowledge to the civil and criminal justice systems. Prerequisite: Junior or Senior standing.

PSYC 430 Biopsychology (3)
The biological bases of the behaviors of the organism, emphasizing the structure and function of the nervous system. The role of biological factors in such behaviors as sleep, sexual behavior, drug addiction, emotion, etc. will be examined. Prerequisites: Junior or senior status, PSYC 150.

PSYC 435 Applied Social Psychology (3)
Survey of theories and research in social psychology. Advanced topics in social psychology through readings and discussion on historical and current perspectives. May include self, person perception, attitudes, attributions, close relationships, social influence, and group conflict. Prerequisites: PSYC 150 and PSYC 320.

PSYC 495 Independent Study (1-3)

PSYC 496 Topics (1-3)

PSYC 499 Internship (1-12)

PSYCHOLOGY: COUNSELING (PSYP)

PSYP 305 Suicide Intervention Training (1)
Provides a clear and direct method to intervene with those at risk of suicide. Students learn to identify risk factors, develop safety plans, practice skills to intervene, and develop an understanding of resources available. This is a two day (16 hour) suicide intervention workshop.

PSYP 306 Applied Ethics in Mental Health and Counseling (1)
Application of professional ethical principles and codes to mental health and health service settings.

PSYP 320 Career Development (3)
Theories of, and factors influencing, career development such as assessment, career maturity, decision making, problem solving, and planning. Current developments in adult career and life development will be discussed including life stages, transitions, midlife crisis, stress, and adjustments necessary for career development effectiveness. Prerequisites: PSYC 201 or consent of instructor.

PSYP 322 Multicultural Service Learning (3)
Exploration of multiculturalism through ethnography and community service field work. Prerequisite: PSYC 201.

PSYP 396 Topics (1-3)

PSYP 410 Introduction to Marriage and Family Counseling (3)
Key theories and approaches for diverse problem areas in Marriage and Family Counseling, including domestic violence and substance abuse. Explore career options and training for counselors. Prerequisite: PSYC 150 or SOCO 144.

PSYP 420 Counseling Processes and Techniques (3)
Counseling principles and practices which facilitate interpersonal communication and effective personal and social development. Counseling skills in attending behavior, listening, problem exploration, responding, understanding, and modes of action are examined, discussed and applied in classroom counseling situations. Prerequisites: PSYC 320 and PSYC 340 or consent of instructor.

PSYP 422 Psychological Interviewing (3)
Psychological interviewing techniques, methods, and interpretation will be examined using the DSM-V. Interview types will include counseling, intake, assessment, and diagnosis. Prerequisites: PSYC 201, PSYC 340 and PSYC 400.

PSYP 424 Group Processes (3)
Dynamics, procedures and processes of the group. Focus will be on understanding self and learning how to help others develop self-understanding as well as personal and social skill. Prerequisites: PSYP 420.

PSYP 496 Topics (1-3)

PSYP 497 Practicum I (4)
Interpersonal training and counseling practice under professional supervision. A typed paper/journal must be submitted for approval and course credit. Prerequisite: senior status and consent of instructor. Practicum must be arranged for the semester prior to enrollment.

PSYP 499 Practicum II (4)
Counseling experience in external field locations according to needs and career goals of the student. A typed paper/journal must be submitted for approval and course credit. Prerequisite: consent of instructor. Internship must be arranged for the semester prior to enrollment.

PUBLIC ADMINISTRATION (PADM)

PADM 314 Public Organization Theory (3)
Examination of the historical development of organizational theory. Focuses on various theoretical approaches to the study of organizational structure and human behavior in public sector organizations.

PADM 315 Public Management (3)
Exploration of the concepts and skills essential to successful management in public organizations. Focuses on the management functions critical for success of the organization and how these functions are affected by operating in the public sector.

PADM 350 Ethics in Public Administration (3)
Philosophical and practical issues related to ethical decision making in the public sector. Emphasis on the analysis of ethical problems and the development of analytical skills and values framework to act ethically in public service roles.

PADM 396 Topics: (1-3)

PADM 442 Public Budgeting (3)
Examines the principles and practices of resource allocation and the role of the budget in policy development and implementation focusing primarily on state and local government. Focuses on the relationship of the budget to strategic planning, policy implementation and performance measures.

PADM 446 Public Personnel Management (3)
Examination of the major issues and components of public personnel systems. Special focus will be placed on the role of the first line government supervisor or middle manager in all facets of personnel administration.

PADM 495 Independent Study (1-3)

RADIOLOGIC SCIENCES (RADS)

RADS 320 Introduction to Radiologic Technology and Patient Care (3)
RADS 320L Introduction to Radiologic Technology and Patient Care Laboratory (1)
Introduction to radiologic technology with emphasis on the education program, the profession, and the healthcare delivery system. Fundamentals of patient care including ethics, professional conduct, communication, radiation protection, and patient management. Study of medical terminology is included. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 321 Radiographic Anatomy and Positioning I (2)
RADS 321L Radiographic Anatomy and Positioning I Laboratory (1)
Exploration of every phase of radiography in an integrated coverage of the appendicular skeletal system, abdomen, thoracic, viscera, and body systems. Radiographic anatomy, postioning, and procedures are discussed and applied in the energized laboratory. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 322 Principles of Radiographic Exposure (2)
RADS 322L Principles of Radiographic Exposure Laboratory (1)
Exploration of fundamental factors that govern and influence the radiographic image, including equipment, accessory devices, and exposure mathematics. Technical and prime exposure factors are discussed and applied in the energized laboratory. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 323 Digital Imaging (2)
Exploration of components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors affecting image acquisition, display, archiving, and retrieval are discussed. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 329 Radiographic Clinical Experience I (1)
Introduction to the radiographic clinical education experience in the clinical education site. Designed to provide patient care and assessment, competent performance of radiologic imaging, and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior to, during, and following the radiologic procedure. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 331 Radiographic Anatomy and Positioning II (2)
RADS 331L Radiographic Anatomy and Positioning II Laboratory (1)
Continuation of RADS 321 with instruction in every phase of radiography of the spinal column, digestive system, urinary system, cranium, and facial bones. Radiographic anatomy, postioning, and procedures are discussed and applied in the energized laboratory. Prerequisite: Acceptance into the Bachelor of Science in Radiologic Sciences program.

RADS 332 Specialized Imaging (2)
Introduction to medical imaging modalities and treatment, including

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equipment, dose differences, types of radiation, patient preparations, indications, and contraindications. Educational and certification requirements are included. Mobile and trauma radiography also are discussed. The course includes an introduction to sectional anatomy of head/brain, chest, mediastinum, abdomen, pelvis, and musculoskeletal system. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 333 Imaging Equipment and Quality Assurance (2)
RADS 333L Imaging Equipment and Quality Assurance Laboratory (1)
Introduction to radiographic, fluoroscopic, and mobile equipment requirements and design. Applied practice of equipment maintenance, quality control, and testing performed in lab. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 334 Image Analysis I (2)
Principles of analyzing radiographic images of the appendicular skeleton, chest, and abdomen. The importance of optimal imaging standards, as well as discussion of a problem-solving technique for image evaluation and the factors that can affect image quality are also addressed. Actual images will be included for analysis. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 335 Radiation Biology and Protection (2)
Principles of radiation interaction in cells and factors affecting cell response to radiation. The course also addresses acute and chronic effects of radiation, dose equivalent limits, and regulatory involvement. Responsibility by the radiographer to patients, personnel, the public, and self are also discussed. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 339 Radiographic Clinical Experience II (4)
Exploration of additional concepts correlating skills with academic courses in radiographic clinical education. Designed to provide patient care and assessment, competent performance of radiologic imaging, and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior to, during, and following the radiologic procedure. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 354 Image Analysis II (2)
Principles of analyzing radiographic images of the axial skeleton (including the spine, sternum, ribs, and cranium), facial bones, paranasal sinuses and the digestive system. The importance of optimal imaging standards, as well as discussion of a problem-solving technique for image evaluation and the factors that can affect image quality are also addressed. Actual images will be included for analysis. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 449 Radiographic Clinical Experience III (6)
Further exploration of clinical education. Designed to provide patient care and assessment, competent performance of radiologic imaging and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior to, during, and following the radiologic procedure. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 451 Imaging Pathology (3)
Introduction to concepts related to the disease process with emphasis on the radiographic appearance of disease. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 452 Sectional Anatomy (3)
Exploration of the location and identification of structures in multiple anatomical planes. Function, orientation, imaging, and pathology will be discussed. Prerequisite: Acceptance into the BS or BAS Radiologic Sciences program.

RADS 453 Advanced Patient Care (3)
Development of patient care knowledge and skills required for advanced medical imaging procedures. Focus is on legal and ethical considerations, drug administration, patient monitoring, emergency care, and sterile technique. Prerequisite: Acceptance into the BS or BAS Radiologic Sciences program.

RADS 459 Radiographic Clinical Experience IV (5)
Further exploration of clinical education. Designed to provide patient care and assessment, competent performance of radiologic imaging and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior to, during, and following the radiologic procedure. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 460 Principles of Magnetic Resonance Imaging (2)
Introduction to the operation of a magnetic resonance imaging (MRI) scanner. Includes magnetic resonance imaging instrumentation, safety, physics, and contract media. Does not include clinical experience. Prerequisites: Acceptance into the Bachelor of Applied Science program or Radiologic Sciences MRI Certificate Program; registered radiologic technologist with minimum associate degree.

RADS 461 Principles of Computed Tomography (2)
Introduction to the operation of computed tomography equipment. Includes instrumentation, image display, radiation safety, and contrast media. Does not include clinical experience. Prerequisite: Acceptance into the BS or BAS Radiologic Sciences program, or CT Certificate program.

RADS 462 Leadership and Management (3)
Identification of skills necessary to work within an effective interdisciplinary health care team. Includes principles of leadership, quality management, and health care law. Prerequisites: Acceptance into the BS or BAS Radiologic Sciences program.

RADS 463 Information Literacy in Radiologic Sciences (3)
Development of life-long learning skills necessary to function competently in the continually changing medical imaging environment. Content includes intellectual inquiry, information literacy, and scholarly research methods.

Prerequisite: Acceptance into the BS or BAS Radiologic Sciences program.

RADS 464 Senior Capstone (3)
Synthesis of radiologic science concepts, prinicples, and procedures. Includes development of resume and interview skills. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 469 Radiographic Clinical Experience V (3)
Further exploration of clinical education. Designed to provide patient care and assessment, competent performance of radiologic imaging and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior to, during, and following the radiologic procedure. Prerequisite: Acceptance into the Radiologic Sciences program.

RADS 470 Applied Magnetic Resonance Imaging (3)
Continuation of RADS 460. Development of knowledge and cognitive skills underlying the intelligent performance of tasks typically required of technologists who perform magnetic resonance imaging procedures. Includes patient care, image production, procedures, artifacts, and quality control. Does not include clinical experience. Prerequisite: RADS 460.

RADS 471 Applied Computed Tomography (3)
Continuation of RTEC 461. Development of knowledge and cognitive skills underlying the intelligent performance of tasks typically required of technologists who perform computed tomography procedures. Includes patient care and safety, imaging procedures, and image assessment. Does not include clinical experience. Prerequisite: RADS 461.

RADS 480 Clinical Specialization I (4)
Demonstration of cliinical competency in Radiologic Science imaging modality. Practical experience gained and demonstrations of competency in positioning, machine control, patient care and image quality in chosen modality. Prerequisite: RADS 460 or RADS 461 (may be taken concurrently).

RADS 490 Clinical Specialization II (4)
Continuation of RADS 480. Demonstration of clinical competency in Radiologic Science imaging modality. Practical experience gained and demonstrations of competency in positioning, machine control, patient care and image quality in chosen modality. Prerequisites: RADS 470 or RADS 471 (may be taken concurrently); and RADS 480.

RADS 495 Independent Study (1-3)

RADIOLOGIC TECHNOLOGY (RTEC)

RTEC 460 Quality Management and Health Care Law (3)
Expansion of the QM skills of technologists to include digital imaging systems and the application of QM principles in an imaging department. Legal and compliance issues affecting employees and employers directly regarding accreditation and compliance issues studied. Guidance on risk management techniques including reporting that can help mitigate non-compliance included. Prerequisite: RTEC 320.

RTEC 480 Clinical Specialization I (4)
Demonstration of clinical competency in Radiologic Science imaging modality. Practical experience gained and demonstrations of competency in positioning, machine control, patient care and image quality in chosen modality. Prerequisites: RADS 460 or RADS 461, or can be taken concurrently.

RTEC 490 Clinical Specialization II (3)
Demonstration of clinical competency in the Radiologic Science specialty areas. Practical experience gained and demonstrations of competency in the areas of positioning, machine control, patient care and image quality in the specialty area chosen. Prerequisite: RTEC 450, RTEC 452, RTEC 454, or RTEC 456.

RTEC 494 Capstone in Radiologic Science (3)
Mastery of a specialization area with proof of competency and preparation for national certification examinations in the specialization included. Study and practical application of research knowledge base is included. Prerequisite: All B.A.S. Radiologic Technology courses.

READING (READ)

READ 092 College Reading Studio (1)
This course is designed to offer supplemental support for students in reading intensive courses across the disciplines. Daily mini-lessons will be provided based on Ten Steps to Advanced College Reading Skills, and will follow with individual assistance with discipline-specific vocabulary from college texts. This is a corequisite with social science 100 discipline strands for students with Accuplacer scores of 62-79.

READ 096 Topics: (1-3)

SOCIAL SCIENCE (SOCI)

SOCI 101 Introduction to Lesbian, Gay, Bisexual, and Transgender Studies (3)
Introduction to lesbian, gay, bisexual, and transgender studies. Exploration of LGBT studies as an academic field and consideration of the experience of being lesbian, gay, bisexual or transgender.

✓ SOCI 120 Technology and Society-GTSS3 (3)
Overview of technological innovations and human societies throughout modern history. Emphasizes impacts of technology within a social, political, economic, and environmental context.

SOCI 196 Topics (1-6)

SOCI 270 Introduction to Pre-Law Studies (2)
Exploration of the path to law school. Dispels the myths about the practice

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of law and law school acceptance. Understanding of skills needed to succeed in law school. Career outlook and resources available to applicants. Open to all majors.

SOCI 296 Topics (1-3)

SOCI 390 GRE Preparation (1)
Introduction to the GRE, including the verbal, quantitative, and writing sections. Includes study tips, practice questions, and critical reading and writing techniques for students to improve their performance on the exam.

SOCI 395 Independent Study (1-3)

SOCI 396 Topics (1-3)

SOCI 397 Structured Research (1-3)

SOCI 401 LSAT Preparation (3)
Preparation for the Law School Admissions Test (LSAT).

SOCI 410 Death, Dying & Bereavement (3)
Provides an in-depth overview of the issues surrounding death, dying and bereavement. The social and psychological processes of death using interdisciplinary readings from psychology, sociology, anthropology, history, medicine and philosophy.

SOCI 470 Pre-Law in Practice (3)
Prepare for law school. Information about types of law, career outlook, making connections, and selecting the right school. Building skills needed for law school. Understanding what is expected, how to apply. Hear from attorneys in the community. Open to all majors. Prerequisite: Junior or senior status.

SOCI 495 Independent Study (1-3)

SOCI 496 Topics (1-3)

SOCI 497 Structured Research (1-3)
Social or behavioral science research under the directed guidance of a faculty member. Designed for junior and senior level students.

SOCIAL WORK (SOWK)

SOWK 150 Introduction to Social Work (3)
Introduction to the profession of social work and its historical development; overview of the knowledge, values, skills, practice settings and groups served by social workers.

SOWK 210 Social Work for Diverse Populations (3)
Knowledge and skills necessary for social work practice with diverse populations. Explores issues of stereotypes, prejudice, discrimination and oppression. Examines cultural diversity in U.S. society and how to increase self-awareness related to worldviews and beliefs about diversity issues. Emphasis on empowerment of individuals and groups and on multicultural competence.

SOWK 296 Topics: (1-3)

SOWK 301 Child Welfare (3)
Signs and symptoms of abuse and neglect of children. Family dynamics in abuse and neglect, and programs of prevention and intervention. Explores foster care, adoptions, delinquency problems, poverty and homelessness, and related issues in child welfare. Examines the crime of human trafficking. Prerequisite: SOWK 150.

SOWK 308 Medical Social Work (3)
Explores interface of social work and patients' rights, medical decision-making, case management, process of diagnosis and treatment, palliative and end-of-life care, and the concept of health care consumer. Focus on the current health care system in the United State, the interface of health care and populations-at-risk, and role of the social worker in medical settings. Prerequisite: SOWK 150.

SOWK 311 Ethical Issues in Social Work (3)
Analysis of specific ethical dilemmas from personal, professional and policy perspectives. Focus on ethical issues common to the social work profession and on the NASW Code of Ethics. Utilize code of ethics as guide to decision making. Explore relationship between professional ethical issues and the development of social policy. Prerequisites: SOWK 150 and SOWK 210.

SOWK 320 Social Work Practices in Mental Health (3)
Practice models and methods of intervention for effective social work practice in mental health care. Includes the promotion of mental health, the prevention of mental illnesses, and delivery of psychosocial treatment and rehabilitation services. Prerequisites: SOWK 150, SOWK 210, SOWK 311, and SOWK 365.

SOWK 344 School Social Work (3)
Overview of social work practice in an educational setting. Cooperative work with school personnel in the identification, prevention and treatment of social, emotional and behavioral problems of children and intervention techniques with parents. Prerequisite: SOWK 150.

SOWK 350 Legal Aspects of Social Work (3)
Exploration of the roles of the social worker in the legal field. Legal terms, procedures, state and federal court systems studied. The legal aspects of protective services for children and adults, the child support laws and the juvenile justice system examined. Prerequisite: SOWK 150.

SOWK 365 Social Work Intervention Methods I (3)
Knowledge, values, and skills for multilevel (micro, mezzo, macro) general practices. Focuses on engaging clients in the helping process, interviewing skills, assessment tools, social histories, goal writing, termination and evaluation. Addresses professional ethics and values and applying systems and ecological frameworks to practice situations. Examines strengths-based assessments, the phases of the helping relationship, and the dynamics of change in interpersonal helping relationships, within a framework of social justice and diversity. Prerequisites: SOWK 150, SOWK 210, and SOWK 320. This course is only open to social majors who have been formally accepted into the BSW program.

SOWK 375 Social Work Intervention Methods II (3)
Examines generalist social work roles and techniques in group work practice. Building on interviewing and engagement skills presented in Intervention Methods I. Focuses on assessment, planning, and intervention with treatment and task groups. Emphasizes basic theory about groups and group process, demonstrates skills necessary for effective practice, explores leadership, group cohesion, and group dynamics. Uses of task and treatment groups in a broad range of settings with diverse client groups. Prerequisites: SOWK 150, SOWK 210, SOWK 320, and SOWK 365. This course is only open to social work majors who have been formally accepted into the BSW program.

SOWK 377 Spirituality and Social Work (3)
Overview of the knowledge, values, and skills to provide spiritually sensitive social work practice. Prepare generalist social work practitioners to work with clients and their families from a holistic framework (bio, psycho, social, cultural, spiritual) and with diversity and respect. Use of interview techniques, spirituality assessments, and strengths-based approaches. Prerequisite: SOWK 150.

SOWK 381 Gerontology and Social Work (3)
Overview of health aspects of aging in the United States. Explores theories of aging, social and health issues, family and caregiving dynamics, and end of life concerns. Prepares generalist social work practitioners to work with older clients and their families and with service delivery systems addressing the needs of this population. Prerequisite: SOWK 150.

SOWK 385 SW Intervention Methods III (3)
Emphasizes study of skills from a problem-solving strengths and empowerment perspective with organizations and community systems. Viewed as an integral component of a model for bringing about social change, especially at the mezzo and macro levels. Attention paid to developing processes of building constitutencies, mobilizing resources, networking, political participation, leadership development, and grassroots development. Introductory overview of strategies, tactics, and techniques of social change. Explores basic skills necessary to write effective grant proposals. Prerequisites: SOWK 150, SOWK 210, SOWK 311, SOWK 320, SOWK 365, SOWK 375, and SOWK 387. This course is only open to social work majors who have been formally accepted into the BSW program.

SOWK 387 Social Work Research Methods (3)
Provides an overview of the principles and methods of basic social work research. Explores qualitative and quantitative research methods and how to critically consume research studies and use research findings to strengthen social work practice. Explore how quality research can assist in making important decisions about the design and implementation of projects, programs, and policies that address the social needs of diverse groups. Create research instruments for numerous purposes (e.g. intake, assessment, client satisfaction, facilitating group services, etc.) Prerequisites: SOWK 150, SOWK 210, SOWK 311, and SOWK 365. This course is only open to social work majors who have been formally accepted into the BSW program.

SOWK 394 Social Work Practicum Seminar I (1)
Discussion of practicum-related issues, professional development, and exploration of learning objectives in field practicum experiences. Requires regular reporting of field activities. Prerequisites: SOWK 150, SOWK 210, SOWK 320, SOWK 365, SOWK 375, SOWK 385, and SOWK 387. Corequisite: SOWK 397. This course is only open to social work majors who have been formally accepted into the BSW program.

SOWK 396 Topics: (1-3)

SOWK 397 Social Work Practicum I (5)
Involves 225 clock hours per semester. Opportunities to apply theories, techniques, and concepts through observation and participation in supervised activities. Assists in the understanding and achievement of learning objectives ini field practicum experiences. Prerequisites: SOWK 150, SOWK 210, SOWK 320, SOWK 365, SOWK 375, SOWK 385, and SOWK 387. Corequisite: SOWK 394. This course is open only to social work majors who have been formally accepted into the BSW program.

SOWK 460 Social Welfare Policy (3)
Nature and development of American social policy. Includes history of current structures of social welfare services, the role of policy in service delivery and analysis of current social policy issues including gender policy, homelessness, health care policy, domestic poverty, and child welfare policy. Provides an overview of social policy and legislation and the processes of influencing public policy. It links policy with social work practice. Prerequisites: SOWK 150, SOWK 210, SOWK 311, SOWK 320, SOWK 365, SOWK 375, SOWK 385, and SOWK 387.

SOWK 491 Directed Readings (1-5)
Student and/or faculty initiated special projects/independent study that explores some aspect of social work theory or practice such as: intervention methods, policy, research, populations-at-risk, values and ethics, aging, spirituality, child welfare, addictions, mental health, social and economic justice, and diversity *Restriction: Senior standing, instructor's permission and a plan for study. Prerequisites: SOWK 150, SOWK 210, SOWK 320, SOWK 365, SOWK 375, and SOWK 387.

SOWK 494 Social Work Practicum Seminar II (1)
Discussion of practicum-related issues, professional development, and exploration of learning objectives in field practicum experiences. Requires regular reporting of field activities. Prerequisites: SOWK 150, SOWK 210, SOWK 320, SOWK 365, SOWK 375, SOWK 385, SOWK 387, SOWK 397, SOWK 394, and SOWK 406. Corequisite: SOWK 497.

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SOWK 497 Social Work Practicum II (5)
Involves 225 clock hours per semester. Provides students with opportunities to apply theories, techniques, and concepts through observation and participation in supervised activities. Assists students in the understanding and achievement of learning objectives in their field practicum experiences. Prerequisites: SOWK 150, SOWK 210, SOWK 320, SOWK 365, SOWK 375, SOWK 385, SOWK 387, SOWK 397, SOWK 394. Corequisite: SOWK 494. This course is only open to social work majors who have been formally accepted into the BSW program.

SOCIOLOGY (SOCO)

✓ **SOCO 144 Marriage and Families-GTSS3 (3)**
Marriage and families in social, historic, institutional, theoretical, and gendered contexts. Includes family formation, family problems, and alternative intimate relationships.

SOCO 202 Introduction to Sociological Inquiry (3)
Methods and areas of sociology. Preparation for writing and research requirements of upper-division sociology courses. Prerequisite: SOCO 260 or SOCO 264.

✓ **SOCO 260 General Sociology-GTSS3 (3)**
An overview of sociological concepts, terminology, basic principles, and important theories; introduction to substantive areas of the field.

✓ **SOCO 264 Social Problems-GTSS3 (3)**
Major contemporary social problems including crime, race relations, war, educational systems, unequal distribution of wealth, and political apathy.

SOCO 296 Topics (1-3)

SOCO 300 Political Sociology (3)
The interactions and interrelationships between social and political forces. Topics covered include state and society, the social bases of power, ideology, and the media. Prerequisite: SOCO 260, or POLS 101 or consent of instructor.

SOCO 303 Sociological Research Methods (3)
Sociology specific. Emphasis on survey research, comparative/historical research, content analysis, and program evaluation. Prerequisites: SOCO 202 and STAT 215.

SOCO 305 Environmental Sociology (3)
An overview of the interrelations among the physical environment, population, and technology; the origin and basis of environmental social movement organizations; the social construction of environmental issues. Prerequisites: SOCO 260 or consent of the instructor.

SOCO 310 Sociology of Religion (3)
Sociological aspects of religion, including the social function of religion, religious traditions in the global village, and the rise of new religious movements. Prerequisite: SOCO 260 or consent of instructor.

SOCO 312 Social Movements (3)
Sociological study of historical and contemporary social movements. Overview of the literature on social movement development, organization, participation and outcomes. Prerequisite: SOCO 260 or consent of instructor.

SOCO 314 Population (3)
Basic concepts of population studies in international context. Demographic trends including fertility, mortality and migration, as well as the causes and consequences of those trends. Prerequisites: SOCO 260 or consent of instructor.

SOCO 316 Social Inequality (3)
Causes and effects of inequality, especially social class, with consideration of race and gender. Prerequisites: SOCO 260, or SOCO 264 or consent of instructor.

SOCO 318 Sociology of Health & Illness (3)
Exploration of the sociological perspectives relating to the definitions and experiences of health and illness including the social distribution of illness in the population, stigmas of bodily and mental illness, health behaviors, comparison of health care delivery systems, and the medical professions. Prerequisite: SOCO 260 or SOCO 264.

SOCO 320 Life Course Sociology (3)
Investigation of the social factors influencing human lives, emphasizing the connection between individual lives and social change. Prerequisites: SOCO 260 or SOCO 264.

SOCO 325 Racial and Ethnic Relations (3)
Sociological perspectives on racial and ethnic relations in the United States. Prerequisites: SOCO 260 or consent of instructor.

SOCO 331 Sociology of Aging (3)
Exploration of the sociological perspectives relating to the definitions and experiences of aging, including demographics of the aging population, family life and social support, physical and mental challenges, Medicare and Social Security, and social problems experienced by the elderly. Prerequisite: SOCO 260 or SOCO 264.

SOCO 340 Sex and Gender (3)
Perspectives on the social organization of sex and gender. Prerequisites: SOCO 260; or consent of instructor.

SOCO 395 Independent Study (1-3)

SOCO 396 Topics (1-3)

SOCO 400 Classical Social Theory (3)
The development of social theory from the Enlightenment through early twentieth century, with emphasis on Marx, Weber, and Durkheim. Prerequisite: SOCO 260 or consent of instructor.

SOCO 410 Contemporary Social Theory (3)
An overview of sociological theory from the early 20th century to the present, with an emphasis on the development of contemporary theory from its classical roots. Prerequisite: SOCO 400.

SOCO 420 Field Studies (6)

SOCO 495 Independent Study (1-3)

SOCO 496 Topics (1-3)

SPEECH (SPCH)

SPCH 101 Interpersonal Communications (3)
Exploration of multiple aspects of human behavior including the communication process, perception, verbal and nonverbal communication, diversity and adapting to others, conflict, culture, and relationships in personal/professional contexts.

SPCH 102 Speechmaking (3)
The preparation, organization, and delivery of a speech.

SPCH 112 Voice and Diction (3)
The use of the speaking voice emphasizing voice placement, speech sounds, breath control, projection, and the phonetic alphabet. Recommended for theatre majors, teachers, prelaw, ministers and business majors.

SPCH 196 Topics (1-3)

SPCH 203 Persuasion (3)
Open discussions on the ethics, process, and application of everyday use of persuasion; how it applies to our advertisements, politics, and friendships; preparation for debate. Prerequisite: SPCH 102.

SPCH 241 Oral Interpretation (3)
The reading aloud of prose, poetry, and essays with the intention of conveying the author's ideas to a listening audience.

SPCH 296 Topics (1-3)

SPCH 303 Nonverbal Communication (3)
The opportunity to observe, record and interpret the nonverbal dimensions of communication behavior and the opportunity to enhance awareness and skill in nonverbal communication behavior in mass media, law, theatre, group dynamics, etc.

SPCH 304 Communication and Conflict (3)
The nature of conflict, conflict structure, conflict styles, and the use of power in conflicts. Application of theories to analyze and set goals to plan strategies and tactics. Study of intervention principles and practices. Prerequisites: upper division standing.

SPCH 305 Communication: Culture, Diversity and Gender (3)
Research and practical application to facilitate constructive relationships with individuals from other countries, with individuals from sub-cultures within our culture, and with individuals of the opposite sex. Prerequisite: SPCH 101.

SPCH 306 Communication and Leadership (3)
Study of communication styles of great leaders from every field of endeavor to determine the sources of their influence over the behaviors, thoughts, and feelings of their followers. Included will be study of the historical environments that gave rise to each leader's style. Prerequisite: SPCH 101.

SPCH 308 Argumentation and Debate (3)
Research and development of various types of debate such as student congress, mock trial, value debate, etc., using national and international topics of current interest. Prerequisites: SPCH 102 or SPCH 203 or consent of instructor.

SPCH 395 Independent Study (1-3)

SPCH 396 Topics (1-3)

SPCH 495 Independent Study (1-3)

SPCH 496 Topics (1-3)

STATISTICS (STAT)

✓ **STAT 200 Probability and Statistics-GTMA1 (3)**
Descriptive statistical methods, elementary probability, sample distribution, binomial, normal, t, and F distributions, parameter estimation, one and two sample tests of hypothesis, simple correlation and regression analysis, one-way analysis of variance, nonparametric inference, time permitting. Introduction to statistical software. Prerequisites: MATH 110 or MATH 113 or consent of instructor.

STAT 215 Statistics for Social and Behavioral Sciences (4)
Descriptive and inferential statistical techniques within the Social and Behavioral Science realm. Topics include: Types of Random Variables, Studies, and Sampling Methods; Plots and Descriptive Statistics; Correlation and Regression; Probability Theory; Hypothesis Testing & Inference including one and two sample t-tests, Chi-Squared Test for Independence, One and Two Factor ANOVA, t-test for Linear Regression Co-variates. SPSS will be used for data analysis. Prerequisites: MATH 110 or higher, and PSYC 150 or SOCO 260 or CRMJ 201 or POLS 101.

STAT 241 Introduction to Business Analysis (3)
Introduction to descriptive, predictive, and inferential analysis techniques, data interpretation, business research skills, and techniques for analysis and modeling of business problems in the workplace using appropriate software. Prerequisites: MATH 113 or higher; and CISB 101 or CISB 205 or CISB 305.

STAT 305 Statistics and Quality Control for Engineering (3)
Introduction to descriptive and inferential statistics, and principles of quality management. Includes descriptive statistics, probability distributions, hypothesis testing, regression analysis, control charts, total quality management, quality improvement process, process capability, gauge repeatability and reproductibility, six-sigma, risk assessment, quality audit and ISO 9000. Prerequisites: MATH 135 or MATH 151, and CSCI 130.

STAT 311 Statistical Methods (3)
Power of statistical tests, categorical data techniques, inference about population means and variances, nonparametric methods, simple and multiple linear regression and correlation, analysis of variance, multiple

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comparisons, introduction to some experimental designs. Use of statistical software. Prerequisites: STAT 200.

STAT 313 Sampling Techniques (3)
Methodology of simple random sampling, stratified, systematic cluster, and two-stage sampling is developed. Estimation of sample size determination, and minimized costs of sampling are discussed. Use of resampling statistical software. Prerequisite: STAT 200.

STAT 350 Mathematical Statistics I (3)
Calculus based mathematical development of discrete and continuous random variables. Topics include probability axioms and rules, Bayes' Theorem, discrete and continuous distributions, expectation, variance, moment generating functions, marginal and conditional distributions, bivariate distributions, transformations, sampling distributions and the central limit theorem. Prerequisites: STAT 311 and MATH 253 (may be taken concurrently).

STAT 351 Mathematical Statistics II (3)
This course is a continuation of STAT 350 Mathematical Statistics I. This course is a calculus-based theoretical study of point estimators by method of moments and maximum likelihood, confidence intervals, hypothesis testing, simple linear regression, analysis of variance, and nonparametric methods. Additional topics may include experimental design, quality control, multiple linear regression, and survival analysis. Prerequisite: STAT 350.

STAT 395 Independent Study (1-3)

STAT 396 Topics (1-3)

STAT 412 Correlation and Regression (3)
Graphical, numerical, and theoretical least-squares analysis for simple and multiple regression and correlation, including inference methods, diagnostics and remedial measures, simultaneous inference methods, the matrix approach to regression and correlation analysis, stepwise regression procedures. Use of statistical software. Prerequisites: STAT 311, and MATH 121 or MATH 135 or MATH 146 or MATH 151.

STAT 425 Design and Analysis of Experiments (3)
Design and analysis of single and multiple factor experiments, fixed, mixed and random effects designs including multiple comparison procedures, transformations, fixed, mixed and random effects designs, completely randomized designs, randomized block designs, Latin square designs, and nested designs. Prerequisites: STAT 311, and MATH 121 or MATH 135 or MATH 146 or MATH 151.

STAT 494 Seminar (1)
Discussions of specialized topics by students, faculty, or visiting professors. One-hour meeting per week.

STAT 495 Independent Study (1-3)

STAT 496 Topics (1-3)

SURGICAL TECHNOLOGY (SUTE)

SUTE 200 Medical Terminology in Surgical Technology (3)
Exploration of word roots, prefixes, and suffixes used in medical language today. Students will learn to combine words to create appropriate medical conditions. Students will learn medical terms, spelling, and definitions related to major body systems, surgical procedures, and conditions associated with the operating room. Prerequisites: Admission to the Surgical Technology Program, Completion of Surgical Technology Foundation courses, BIOL 209/209L, BIOL 210/210L, BIOL 241, and PSYC 150. Corequisites: SUTE 202, SUTE 204, and SUTE 206.

SUTE 202 Fundamentals in Surgical Technology (4)
Approaches to surgical technology. Students will learn tasks and responsibilities of the surgical technologist including the practice of sterile technique, surgical scrub, gown and glove, patient positioning, draping, and surgical prep on patients. Students will learn the practice of standard precautions in surgery. Skills will be practiced in a clinical setting. Prerequisites: Admission to the Surgical Technology Program, Completion of Surgical Technology Foundation courses, BIOL 209/209L, BIOL 210/210L, BIOL 241, and PSYC 150. Corequisites: SUTE 200, SUTE 204, and SUTE 206.

SUTE 204 Basic Surgical Technology Skills Lab (4)
Clinical approaches to surgical technology. Students will demonstrate the use of electrocautery and laser equipment, as well as endoscopic instruments. They will describe commonly used lab and x-ray tests, as well as instrumentation used for abdominal and laparoscopic procedures. Students will demonstrate basic set up for urology, and ear, nose, throat and eye procedures. Prerequisites: Admission to the Surgical Technology Program; Completion of Surgical Technology Foundation course; BIOL 209/209L, BIOL 210/210L, BIOL 241, and PSYC 150. Corequisities: SUTE 200, SUTE 202, and SUTE 206.

SUTE 206 Pharmacology for Surgical Technology (2)
Exploration of safe use of prescription and nonprescription drugs. Emphasis will be placed on the impact of safe drug use in promoting and maintaining health. The course will examine how drugs affect the body by changing many of its normal mechanisms and thereby contributing to potential health problems during surgery. Prerequisites: Admission to the Surgical Technology Program, Completion of Surgical Technology Foundation courses, BIOL 209/209L, BIOL 210/210L, BIOL 241, and PSYC 150. Corequisities: SUTE 200, SUTE 202, and SUTE 204.

SUTE 210 Safety in Surgical Technology (3)
Exploration of information to prepare, plan, detect and communicate safety and security in the surgical arena. Students will learn tasks and responsibilities of incident-management, all- hazard preparation, and components for personal, community, and institutional disaster

planning. They will learn OSHA, CDC, and environmental safety and protection for their practice. Prerequisites: SUTE 200,SUTE 202, SUTE 204, and SUTE 206. Corequisites: SUTE 212, SUTE 214, and SUTE 218.

SUTE 212 Surgical Procedures I (3)
Exploration of specific surgical specialties including General Surgery, Obstetrics and Gynecologic, Genitourinary, Orthopedics, and Neurosurgical. This course introduces the student to the surgical specialties with a focus on a systems review of pathology in conjunction with specific procedures performed, specialized instrumentation, and surgical modalities of each surgical specialty. Prerequisites: SUTE 200, SUTE 202, SUTE 204, and SUTE 206. Corequisites: SUTE 210, SUTE 214, and SUTE 218.

SUTE 214 Surgical Procedures II (3)
Exploration of specific surgical specialties including Otorhinolaryngologic, Oral and Maxillofacial, Plastic and Reconstructive, Ophthalmic, Cardiothoracic, and Peripheral Vascular. Students will learn the surgical specialties with a focus on a systems review of pathology in conjunction with specific procedures performed, specialized instrumentation, and surgical modalities of each surgical specialty. Prerequisites: SUTE 200, SUTE 202, SUTE 204, and SUTE 206. Corequisities: SUTE 210, SUTE 212, and SUTE 218.

SUTE 218 Specialty Surgical Procedures (4)
Exploration of specific surgical specialties including plastic, pediatric, ophthalmic, vascular, orthopedic, neurosurgery, thoracic, and cardiac surgery. The student will focus on a systems review of pathology in conjunction with specific procedures performed, specialized instrumentation, and surgical modalities of each surgical specialty. Prerequisites: SUTE 200, SUTE 202, SUTE 204, and SUTE 206. Corequisites: SUTE 210, SUTE 212, and SUTE 218.

SUTE 220 Surgical Practicum I (4)
Development of the student's individualized experience via practice in the field. Emphasis is placed on demonstrating proficiency in skills necessary for participation in basic surgical procedures. This course will afford the student the opportunity to build on skills learned and actively participate in selected surgical procedures in the basic surgical specialties learned in Surgical Procedures 1. Prerequisites: SUTE 210, SUTE 212, SUTE 214, and SUTE 218. Corequisites: SUTE 230 and SUTE 240.

SUTE 230 Surgical Practicum II (4)
Development of the student's individualized experience via practice in the field. Emphasis is placed on demonstrating proficiency in skills necessary for participation in basic surgical procedures learned in Surgical Procedures 2. Prerequisites: SUTE 210, SUTE 212, SUTE 214, and SUTE 218. Corequisites: SUTE 220 and SUTE 240.

SUTE 240 Surgical Practicum III (4)
Development of the student's individualized experience via practice in the field. Emphasis is placed on demonstrating proficiency in skills necessary for participation in basic surgical procedures in specialty areas learned in Specialty Surgical Procedures. The student will prepare for the final competencies and prepare for transition to the work environment. Prerequisites: SUTE 210, SUTE 212, SUTE 214, and SUTE 218. Corequisites: SUTE 220 and SUTE 230.

TECHNOLOGY INTEGRATION (TECI)

TECI 111 Healthcare Data Management and Information Systems (3)
Introduction to the electronic health record (EHR) components and health informatics including infrastructure, privacy, security, and legal implications. Federal involvement and its impact on information technology regarding health data will be discussed. The transformation of data into meaningful information, through research, vital statistics, and epidemiology will be demonstrated. Data quality, integrity, collection, access, and retention will also be emphasized.

TECI 118 AC Passive Circuits (3)
TECI 118L AC Passive Circuits Laboratory (1)
Analysis of AC circuits including resistors, capacitors, inductors, and use of standard test equipment. Three one-hour lectures and one one-and-one-half hour laboratory per week.

TECI 131 Principles of Information Assurance (3)
Exploration of skills and knowledge required to survey key issues associated with protecting information assets, determine the levels of protection and response to security incidents, and design a consistent, reasonable information security system. Students learn to inspect and protect information assets, detect and react to threats to information assets, and examine pre- and post-incident procedures.

TECI 132 Introduction to IT Hardware and System Software (3)
Basic hardware and software study of stand-alone or local/wide-area computers. Hands-on experience using 5x or above architecture.

TECI 142 Internet of Things (3)
Introduction to the network and how the internet expands to sectors such as manufacturing floors, energy grids, healthcare facilities, and transportation. Students will learn the network of physical objects that contain embedded technology to communicate and interact with their internal states. Topics will also include cloud applications and cloud-based office productivity software.

TECI 163 Convergent Technologies (3)
Introduction to telecommunications, including how data, voice, and video technologies are converging for telecommunications systems. Topics will also include wireless, ISDN, PCM, DSL, cable, IP voice, and computer networks.

TECI 170 Introduction to Communications (3)
Overview of communication systems that include both central office based and premise based platforms. The switching and service components of

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RBOC and inter-exchange providers will be examined and discussed. Characteristics, advantages, and disadvantages of the various systems will be compared and contrasted. Architecture and design of switching infrastructures and components will also be covered.

TECI 180 Cisco Networking I (3)
The first of four semester courses in Cisco's Networking Academy curriculum. Concepts covered are: OSI model, internetworking devices, IP addressing, LAN media and topologies, structured cabling, electronics. CCNA certified individual can perform the following tasks: -Install and configure Cisco Switches and routers in multi-protocol internetworks using LAN and WAN interfaces. -Provide Level 1 troubleshooting service -Improve network performance and security -Perform entry-level tasks in the planning, design, installation, operation, and troubleshooting of Ethernet and TCP/IP networks.

TECI 185 Cisco Networking II (3)
The second of four semester courses in Cisco's Networking Academy curriculum. Concepts covered are: Safety; Networking; Network terminology and protocols; Network standards; LANs, MANs, SANs, WANS; OSI model; Ethernet; Token ring; FDDI; TCP/IP addressing protocol; Dynamic routing; the Network Administrator's role and function. Prerequisite: TECI 180.

TECI 195 Independent Study (1-4)

TECI 196 Topics: (1-3)

TECI 230 Cisco Networking III (3)
The third of four semester courses in Cisco's Networking Academy curriculum. Concepts covered are: LAN switching; VLANs; LAN design; IGRP; Access lists; IPX/SPX; with concepts applied through design of a Threaded Case Study (TCS). Prerequisites: TECI 180 and TECI 185.

TECI 235 Cisco Networking IV (3)
The fourth of four semester courses in Cisco's Networking Academy curriculum. Concepts covered are: WANs, SANs design; PPP; ISDN; Frame relay; Master documentation skills; with concepts applied through design of a Threaded Case Study (TCS). Prerequisites: TECI 180, TECI 185, and TECI 230.

TECI 240 VoIP Fundamentals (3)
Covers the components of engineering the telephone outside plant, fundamentals of transmission, resistance design, and distribution cable design in serving a customer area.

TECI 242 Cloud Computing (3)
Introduction to cloud computing and how to install, configure, and manage a cloud environment. Builds on knowledge of hypervisor and virtual machine environments.

TECI 245 Security Fundamentals (3)
Comprehensive overview of network security. Includes general security concepts. Communication security includes remote access, e-mail, the Web, directory and file transfer, and wireless data. Common network attacks introduced. Cryptography basics incorporated. Operational/ organizational security discusses as it relates to physical security, disaster recovery, and business continuity. Computer forensics introduced.

TECI 251 Leadership (2)
Personal and professional leadership skills used to aid in the transition from worker, to a supervisory position.

TECI 260 Information Technology Hardware and System Software (3)
Use of an internal systems approach to building and maintaining stand-alone or local/wide area computers utilized in networking. Hands on experience using 5x or above architecture.

TECI 265 Advanced IT Hardware and System Software (3)
Windows Domain Management and Windows Deployment. Introduces Microsoft Deployment Toolkit (MDT) to accelerate and automate deployments of Windows 8,Windows Server 2012, Windows 7, Office 2010, and Windows Server 2008 R2. MDT provides a common console with comprehensive tools and guidance for every organizational role. Recommended process and toolset to automate large-scale desktop and server deployments. Prerequisite: TECI 260.

TECI 290 Certification: (1)
A capstone certification preparation course specifically addressing each emphasis and the associated certifications.

TECI 292 Capstone in Technical Engineering Planning and Economics (4)
Knowledge to articulate the tactical planning functions performed within capacity provisioning. Access and apply the various tactical planning tools and data elements to supporting documentation. Economic principles in costing, value, capital investment, profitability and inventory.

TECI 295 Independent Study (1-3)

THEATRE (THEA)

THEA 102 Introduction to Theatre Technology: Stagecraft (2)
Introduction to basic scene shop safety, organization of materials, hand and machine carpentry and basic stagecraft techniques.

THEA 103 Introduction to Theatre Technology: Costume (2)
Introduction to basic costume shop safety, organization and materials, hand and machine sewing.

THEA 104 Introduction to Theatre Technology: Lighting (2)
Introduction to basic lighting safety and procedures of hang, focus, color and circuitry.

THEA 105 Introduction to Theatre Technology: Sound Technology (2)
Introduction to basic theatre sound design, protocol, and execution, including live audio technology and computer editing.

THEA 114 Summer Theatre (3)
THEA 214 Summer Theatre (3)
THEA 314 Summer Theatre (3)
THEA 414 Summer Theatre (30
Professional summer theatre experience. The student is expected to participate in all phases of the theatre operation including acting, technical work, directing, box office management, etc. It is advisable for a student enrolled in summer theatre not to enroll in any other class. Five plays are presented in a seven-week period.

THEA 116 Music Theatre Workshop (1)
THEA 216 Music Theatre Workshop (1)
THEA 316 Music Theatre Workshop (1)
THEA 416 Music Theatre Workshop (1)
A performance-based ensemble that combines musical theatre singing, acting, and dancing into a unified performance. Through focus on the works of specific composers and/or stylistic eras, students will produce and perform a musical revue for a public audience. Intended for Music Theatre majors, but students from other disciplines are invited to enroll. Prerequisites: THEA 153, MUSL 137, or consent of instructor.

THEA 117, 118 Play Production (1)
THEA 217, 218 Play Production (1)
THEA 317, 318 Play Production (1)
THEA 417, 418 Play Production (1)
A practical course in stagecraft concerned with the production of plays. The student works in all phases of production. Students will work three hours per week unless other arrangements are made with the instructor.

THEA 119, 120 Technical Performance (1)
THEA 219, 220 Technical Performance (1)
THEA 319, 320 Technical Performance (1)
THEA 419, 420 Technical Performance (1)
Direct participation in the technical aspects of various productions. Grade will depend upon the preparatory work involved and upon the final technical production. Students must work a minimum of two productions in order to receive credit.

THEA 128, 129 Theatre Forums (1)
THEA 228, 229 Theatre Forums (1)
THEA 328, 329 Theatre Forums (1)
THEA 428, 429 Theatre Forums (1)
Specialized workshops in various aspects of theatre made possible by visiting artists and/or lecturers or by attending seminars or workshops. Papers and discussions are used for evaluation.

THEA 130 Script Analysis (3)
Introduction to practical analysis for enhancing the move from script to performance. Familiarizes students with script analysis techniques useful to the collaborative theatrical team.

✓ **THEA 141 Theatre Appreciation-GTAH1 (3)**
Examination of basic presentation techniques and history of theatre.

THEA 142 Make-up (3)
All types of make-up for the stage. Students examine straight and character make-up techniques and learn the use of crepe hair, prosthetics, and other material.

✓ **THEA 145 Introduction to Dramatic Literature-GTAH1 (3)**
Dramatic literature from classical Greeks to modern dramatists.

THEA 147, 148 Drama Performance (1-2)
THEA 247, 248 Drama Performance (1-2)
THEA 347, 348 Drama Performance (1-2)
THEA 447, 448 Drama Performance (1-2)
Requires a student to appear in a major production on campus. The grade will depend upon the preparatory work on the play's character and upon the final performance. Prerequisite: consent of instructor.

THEA 150 Fundamentals of Acting (3)
This course will introduce non-theatre majors to the basic components of the acting process, including scene work, improvisation, and audition techniques.

THEA 153 Acting I: Beginning Acting (3)
Fundamentals of Acting via improvisation and scene study. Students perform in solo, duo and/or group scenes. Prerequisite: Theatre Arts major or minor in good standing.

THEA 156 Acting II: Contemporary Scenework (3)
Further development in the application of Stanislavski-based theory studied in Acting I. Includes substantial scene and monologue work in addition to beat analysis. Continued investigation into the depth and breadth of the actor's art. Prerequisite: THEA 153 or consent of instructor.

THEA 196 Topics (1-3)

THEA 202 Theatrical Design Studio I (3)
Exposure to the elements of design in a theatrical context through lectures and projects. Prerequisite: THEA 102, THEA 103, THEA 104, THEA 105, or ARTA 123 or ARTE 101 or ARTG 122

THEA 203 Theatrical Design Studio II (3)
Exploration of the collaborative process in theatrical design. Prerequisite: THEA 202.

THEA 213 Creative Play Activities-Drama (2)
Creative dramatics in a learning situation. Includes subject matter of interest to anyone in early childhood education, general education, social work, religious education, and/or recreation.

THEA 253 Acting III: Stage Movement (3)
Basic techniques of gesture, movement styles, and combat. Developing an awareness of the use of the body as a means of expression is emphasized. Prerequisites: THEA 156 or consent of instructor.

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

THEA 255 Musical Theatre Techniques (3)
Exploration of solo song interpretation. Emphasis on basic mechanical, analytical, and physical skills needed to perform musical theatre. Building on an acting foundation, issues of range and vocal support as well as style and repertory will be emphasized. Prerequisites: THEA 150 or THEA 153; MUSA 137, or one semester of private vocal study, or by consent of instructor.

THEA 256 Acting IV: Auditions (3)
Resume writing. Choice and preparation of effective audition pieces. Prerequisite: THEA 253 or consent of instructor.

THEA 296 Topics (1-3)

THEA 300 Advanced Acting: Stage Combat (2)
This course is designed to introduce the actor to advanced study in various theatrical fighting styles including: unarmed, rapier and dagger, sword and shield, smallsword, broadsword, knife, single sword, and quarterstaff. The student will learn stage combat techniques adapted from actual historical fighting techniques and use those techniques in scenework. Prerequisite: THEA 253.

THEA 303 Theatrical Design Studio III (3)
Development of further projects in collaborative Theatrical Design. Prerequisite: THEA 203

THEA 322 Stage Management (3)
Theory and principles of human resources management, theatre technical production and actual stage management situations. Prerequisites: THEA 153 or THEA 243 or THEA 244 or consent of instructor.

THEA 323 Computer Aided Drafting for the Theatre (3)
Exploration of Vectorworks and other 3D computer aided drafting software (CAD) to create plots and drawings for theatrical scenic and lighting designs. Prerequisites: THEA 102 and THEA 104.

THEA 325 Rigging and Special Effects (3)
Introduction to stage rigging, hanging lighting and scenery, weighting, safety, and flying hard and soft goods. Advanced technique of theatre technology including smoke, electrics, and other backstage effects. Prerequisites: THEA 102 and THEA 104.

THEA 327 Multimedia Technology for the Theatre (3)
Application of video projection technology and integrated show control software to create original designs for live performance. Prerequisites: THEA 102 and THEA 104.

THEA 331 Theatre History I: 400 B.C. to 1642 (3)
History of theatre as an institution and its relationship to the other arts and to the social and economic environment, from 400 B.C. to 1642 A.D.

THEA 332 Theatre History II: From 1642 to the Present (3)
Major world theatre events from 1642 to the present day.

THEA 333 Art, Architecture and Fashion: Prehistory to the Present (3)
Exploration of art, architecture, and fashion from Pre-History to the present.

THEA 341 Musical Theatre History and Literature (3)
In-depth study of the literature and styles of the master composers of music theatre from its beginnings through the present day. Course work is designed for the Musical Theatre major, utilizing lecture and listening lab format and a research paper on a subject of the student's choice.

THEA 343 Scene Design (3)
Experience in the designing of scenery and props for various types of productions with emphasis on research, acquisition, drafting, perspective, and rendering techniques. Prerequisite: THEA 243 or consent of instructor.

THEA 344 Advanced Stage Lighting (3)
Advanced training in the design and execution of lighting for the stage. Prerequisite: THEA 244 or consent of instructor.

THEA 345 World Drama (3)
Students will examine the richness and diversity of contemporary world theatre and drama from a global context.

THEA 353 Advanced Acting: Styles in Acting (3)
Various styles of acting used for the Classical, Elizabethan, Romantic, 19th century Melodrama and Realistic periods. Prerequisite: THEA 256 or consent of instructor.

THEA 354 Advanced Acting: The Meisner Approach (3)
An examination of the Meisner Approach, the "film industry standard" technique that actors use to explore the Realistic/Naturalistic genre of plays and screenplays. Prerequisite: THEA 256 or consent of instructor.

THEA 355 Music Theatre Repertoire (3)
Further development of song interpretation through scene study and ensemble performance. Emphasis on creating performances unified both dramatically and musically through show research and script analysis to develop characterization. Prerequisites: THEA 255, DANC 174, and DANC 177, or consent of instructor.

THEA 356 Advanced Acting: Dialects (3)
Introduces students to the fundamentals of acting while using common stage dialects. Prerequisites: SPCH 112 and THEA 256, or consent of instructor.

THEA 360 Costume Construction II (3)
An introduction to developing period patterning, interpreting a rendering into finished garment, investigating ethnic styles and refining creative problem-solving skills. Prerequisite: THEA 260.

THEA 369 Improvisation (2)
Introduction to basic improvisational acting techniques, utilizing guided lectures and exercises and illustrating the role of non-script work in the development of the student actor. Students will create characters, scenes,

and short original works. Prerequisites: THEA 256.

THEA 376 World's Greatest Films (3)
Aesthetics and elements that qualify film as an important art form as seen through the major contributors from three important culturally diverse areas of the world: Europe, Asia and America.

THEA 380 Playwriting I (3)
Fundamentals of playwriting through a systematic, textual approach, the proper format of scriptwriting, and the writing of short scripts based on common thematic elements.

THEA 381 Directing I (3)
The fundamentals of directing culminating in the direction of a scene or short play for public viewing. Prerequisites: Junior or senior level Acting/Directing major, or consent of instructor.

THEA 382 Directing II (3)
Advanced directing techniques and production of a one-act play for public viewing. Prerequisite: THEA 381 or consent of instructor.

THEA 395 Independent Study (1-3)

THEA 396 Topics (1-3)

THEA 400 Sound Design for Theatre (3)
Incorporates theory and practice of conceptual sound design for live theatre, with extensive work in QLab software. This course will apply extensive knowledge and use of sound recording devices, mixing software, sound effects libraries, and playback methods.

THEA 401 Career Preparation (3)
An introduction to the administrative and business aspects of the performing arts. Prerequisites: Senior standing or consent of instructor.

THEA 403 Methods of Teaching Drama and Speech (3)
Teaching communication, speechmaking, debate and discussion, creative drama, oral interpretation, play selection and direction in the public schools. Prerequisites: junior standing in English education or speech/theatre programs.

THEA 404 Theatrical Design Studio IV (3)
Development of further projects in collaborative Theatrical Design. Prerequisites: THEA 202 and THEA 203.

THEA 411 American Drama (3)
The study of American drama and theatre trends from the first American playwright to the current trends of today.

THEA 412 Contemporary Drama (3)
A study of contemporary drama from the advent of Realism to the present day.

THEA 445 Senior Tech/Design Capstone (3)
Work experience in various aspects of theatre tech/design. Prerequisites: Senior standing or consent of instructor.

THEA 446 Senior Tech/Design Capstone (3)
Work experience in various aspects of theatre tech/design. Prerequisites: Senior standing or consent of instructor.

THEA 453 Advanced Acting: Acting for the Camera (3)
The transition from stage acting techniques to camera acting techniques. Students will have the opportunity to work on camera with simplified sets and properties. Prerequisites: THEA 256 or consent of instructor.

THEA 454 Advanced Acting: Elizabethan Acting Techniques (3)
An in-depth exploration of acting approaches to the verse drama of Shakespeare. Prerequisites: THEA 256 or consent of instructor.

THEA 459 Advanced Acting: Chekhov Technique (3)
Introduction and exploration of the Michael Chekhov Acting technique. Prerequisites: THEA 256 or consent of instructor.

THEA 490 Honors Seminar (3)
Advanced study of the creative process for students accepted into the Theatre Arts Honors Program. Topics will include commonalities to all creative processes and the interface between the artist, their work, and their community. Prerequisite:Acceptance into the Theatre Arts Honors Program.

THEA 494 Performance Seminar: Acting/Directing and Musical Theatre Capstone (3)
Exploration of theories of audition, rehearsal and performance for upper division performance majors.

THEA 495 Independent Study (1-3)

THEA 496 Topics (1-3)

THEA 498 Honors Project/Thesis (3)
Development of individualized research and writing for the student accepted into the Department of Theatre Arts Honors program. Prerequisite: Acceptance into the Theatre Arts Honors Program.

THEA 499 Internship (1-9)
Work in acting/directing, design/tech, music theatre and theatre management, or other situations that meet the instructor's approval. Prerequisites: senior standing and consent of the instructors.

TRANSPORTATION SERVICES CLUSTER: AUTOMOTIVE (TSTA)

TSTA 245 Manual Drive Trains (4)
Standard repair practices for drive train components to include: clutch, transmission, transaxle, drive axle, driveline, c-v and R & R procedures.

TSTA 247 Automatic Drive Train Service (4)
Standard repair practices for automatic drive trains to include: diagnosis, testing, R & R, and servicing of transaxles/rear wheel drive transmissions. Prerequisites: TSTC 100, 101, 140.

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TSTA 265 Engine Control Services (3)
Repair and diagnosis of engine control systems with an emphasis on scan tool diagnosis and live hands on repair of systems. Prerequisites: TSTC 100, TSTC 101, TSTC 130, and TSTC 160.

TSTA 267 Body Controls (3)
Theory, repair, and diagnosis of body accessories including air bags, electronic monitors, power seats, windows and wipers. Prerequisite: TSTC 100, TSTC 130, and TSTC 160.

TSTA 275 Alignment and Suspension Service (3)
Introduction to anti-lock brake systems to include: ABS types and operation, diagnostics, traction control, stability control, regerative braking and active braking systems.

TSTA 286 Hybrid Vehicles (2)
Introduction to hybrid technology in the transportation industry including: power and transmission designs, batteries, plug-in technology, control systems, safety, associated systems, diagnostics and repair of the modern hybrid vehicle. Prerequisites: TSTC 100, TSTC 130, and TSTC 160.

TSTA 287 Engine Performance and Emissions (3)
Diagnosis and repair of engine performance and emissions-related failures. Emphasis on strategy based diagnostics through the use of exhaust gas analysis. Prerequisites: TSTC 100, TSTC 130, TSTC 160, and TSTA 265.

TSTA 289 Alternative Fueled Vehicles (2)
Introduction to the operational theory and principles, safety and repair of hybrid, fuel cell and hydrocarbon and alcohol-based alternative fueled vehicles. Emphasis on industry standard safety and repair practices. Prerequisites: TSTC 130 and TSTC 160.

TRANSPORTATION SERVICES CLUBS: CORE (TSTC)

TSTC 100 Introduction to Transportation Services (2)
Introduction to procedures, tool usage, basic shop safety, basic employment skills, job documentation and equipment usage..

TSTC 101 Vehicle Service and Inspection (3)
Introduction to vehicle systems, maintenance, inspection, internal combustion engine theory, systems diagnosis, fundamentals and evaluation. Service of the vehicle systems with emphasis on inspection and observation.

TSTC 130 Electrical I (2)
Introduction to electrical theory, circuits, components, testing and use of test equipment.

TSTC 160 Electrical II (2)
Study of electronic control systems applied to today's modern vehicles. Emphasis on sensors, actuators, and diagnostic techniques.

TSTC 170 Chassis Fundamentals (2)
Introduction to front and rear suspension systems, including: steering front end geometry, maintenance,light repair and component nomenclature.

TSTC 171 Brakes I (2)
Theory, components, general repair practices and diagnosis of current brake systems.

TSTD 177 Air Systems Repair and Service (2)
This course studies the air systems on the heavy duty truck. The brakes, transmission shift, seats, and rear axle shift will be covered, to include, service and repair of components and systems. Repair of foundation brakes will also be included.

TRANSPORTATION SERVICES CLUSTER: DIESEL (TSTD)

TSTD 215 Diesel Engine Reconditioning (5)
Industry standard rebuild practices for diesel engines. R & R of engine, complete disassembly, assembly and running of engine is covered. Tune-up and fuel system adjustment are covered.

TSTD 265 Diesel Engine Controls (3)
Repair and diagnosis of engine control systems with an emphasis on scan tool diagnosis and live hands-on repair of systems.

TSTD 275 Heavy Duty Suspension (2)
Types of on-road suspensions, tires, repair of components, diagnosis, measurements, and adjustments to front and rear suspensions.

TRANSPORTATION SERVICES CLUSTER: GENERAL (TSTG)

TSTG 115 Gas Engine Reconditioning (4)
Industry standard rebuild practices for gas engines. R & R of engine, complete disassembly, assembly and running of engine is covered. Prerequisites: TSTC 100, 101, 110.

TSTG 120 Industrial Safety Practices (2)
Overview of current OSHA and EPA general industry regulations with an emphasis on hazardous materials, right-to-know, record keeping, and worker role in safety.

TSTG 135 Starting and Charging Systems (2)
Electrical component repair to include: alternators, starters, wiring, and other electrical components. Prerequisites: TSTC 100, TSTC 101, TSTC 130, and TSTC 160.

TSTG 150 Fluid Power (3)
Principles of hydraulics and pneumatic system including the construction, application, repair, maintenance and

troubleshooting of components and systems.

TSTG 175 Brakes II (2)
Repair of brake systems to include: shoes, pads, cylinder reconditioning, machining rotors and drums, diagnosis, bleeding, R & R components, parking brakes and anti-lock systems.

TSTG 195 Climate Control (4)
Repair, diagnosis, R & R of components, charging, recycling and testing of heating and air conditioning systems of over the road vehicles. Theory of operation, nomenclature, identification, safety and environmental impact factors of air conditioning. Also covers heating and ventilation systems.

TSTG 220 Workplace Skills (3)
Employment skills encompassing leadership, goal setting, personal traits, conflict resolution, quality, time management, life-long learning, written and oral communication, and customer relations.

TSTG 240 Job Shop (4)
Application of workplace skills in a controlled shop environment, through the use of real-life lab work projects, performed in house, when internships or co-op opportunities are not available. Prerequisite: Sophomore status or consent of intructor.

TSTG 270 Practical Applications (4)
Designed to increase student competency through the use of internships or co-op training and real-life shop experiences in their chosen area specialty. Prerequisite: Consent of Instructor.

TSTG 275 ABS Diagnostics (2)
Introduction to anti-lock brake systems to include: ABS types and operation, diagnostics, traction control, stability control, regerative braking and active braking systems. Prerequisites: TSTC 100, TSTC 130, TSTC 160, TSTC 171, and TSTG 175.

TSTG 296 Topics (1-2)

UNIVERSITY COLLEGE (UNIV)

UNIV 096 Gearing Up For College (1-3)

UNIV 100 College Success Skills (1)
Introduction to fundamental learning skills, first semester management strategies and campus resources specific to the higher education environment. Emphasized development of basic practical competencies necessary for successful completion of entry level university courses.

UNIV 101 First Year College Success (2)
Assistance and guidance for students in maximizing their potential for success in college by promoting their academic growth. Emphasizes test taking, reading techniques, note taking, and memory as well as the following: critical thinking, stress management, utilization of campus resources, goal setting, relationship of academic planning to career goals, career exploration and other topics.

UNIV 102 Community College Success (2)
Introduction to fundamental learning skills and first semester learning and management strategies, specifically for students engaged in career and technical education pathways.

UNIV 103 Community College Success II (1)
Continued support strategies for students in the second semester of college. Prerequisite: UNIV 102.

UNIV 105 Competency Portfolio Development (1)
Required preparation of learning portfolio for assessment of academic credit. Will aid in organization and completion of portfolio for prior learning experiences; workshop credit is unrelated to final approval of portfolio for specific course credit.

UNIV 196 Topics (1-3)

UNIV 201 Theory and Practice of College Peer Tutoring (3)
General and specific training for college level peer tutoring. Readings, discussion, experiential exercises expose students to contemporary learning theories, learning enhancement techniques, and effective applications to group and individual learning situations. Supervised tutoring practicum applies theories and concepts to actual tutoring sessions. Prerequisite: permission of instructor; 2.5 GPA; recommendation by instructor in subject area.

UNIV 202 Sophomore Year Experience (2)
Exploration of career and academic interests. Emphasis on self-discovery, resume building, making connections with faculty and community members, and solidification of academic plans. Includes a follow-up opportunity to job shadow and participate in service learning. Prerequisites: Sophomore level standing, permission of instructor.

UNIV 296 Topics: (1-3)

WATER QUALITY MANAGEMENT (WQMS)

WQMS 100 Introduction to Water Quality (3)
Introduction to the water and wastewater treatment field and the various applied science concepts that are used to operate, maintain and monitor water quality; includes the hydrological cycle, water sources, hydraulics, ecosystems, pollution, water chemistry, water calculations, microbiological aspects of water and water quality control.

WQMS 105 Specific Calculations for Water Quality Management (4)
An in-depth study of the calculations associated with water and wastewater treatment; includes dimensional analysis, manipulation of conversation factors, geometric figures, velocities, detention time, surface loading, filtration and backwash rates, porosity, weir overflow rates, efficiencies, weight of dry solids, sludge pumping, settleable solids, volatile solids, mean cell residence times, settleability, disinfection and chemical dosage as

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relating to trickling filters, ponds, RBC, and activated sludge.

WQMS 106 Mechanical/Physical Treatment (3)
Introduction to wastewater treatment; includes the technician and their responsibility, effects of waste discharges, natural cycles, solids in waste discharges, natural cycles, solids in wastewater, NPDES permits, collection systems, pretreatment, primary treatment, secondary treatment, advanced treatment, flow measuring, solids handling and disposal.

WQMS 109 Water Distribution (3)
Purpose, selection and location of water storage facilities and the operation and maintenance of related equipment; includes storage facilities and capabilities, booster pumps, water mains and appurtenances, joints, pipe protection and installation, valves, fittings, hydrants, quality standards, contaminants and degradation inspection and monitoring, system troubleshooting, surveillance, cross connections, pressure main breaks, corrosion control, disinfection and emergency planning.

WQMS 116 Conventional Surface Water Treatment (3)
Coagulation, flocculation, sedimentation, filtering, corrosion and taste and odors; includes descriptions, operating procedures, associated calculations, start-up and shut down procedures, laboratory tests, troubleshooting, maintenance, safety and records.

WQMS 118 Wastewater Collection Systems (3)
Purpose, components and design of collection systems; including safety procedures, inspection and testing, pipeline cleaning and maintenance, underground repair, lift stations and sewer rehabilitation.

WQMS 119 Basic Water Quality Analysis (4)
Relation of laboratory control tests to the chemistry of water and wastewater treatment. Students gain the skills and techniques to operate within a laboratory; includes laboratory equipment and instrumentation-identification, set-up and calibration, safety, sample collection and preservation, written reports and laboratory tests. Laboratory testing includes hardness, alkalinity, dissolved oxygen, biochemical oxygen demand, chlorine residual, pH, phosphorus, dissolved solids, total solids, suspended solids, turbidity, Langlier index, fluoride and biomonitoring.

WQMS 124 Water Certification Review for Class C & D (3)
Preparation of students for the operator's certification test in water at the C and D level. Topics include water principles, mathematics, hydraulics, water filtration, chemical treatment, source control, basic operations, Colorado Primary Drinking Water Regulations, housekeeping, and laboratory analysis.

WQMS 125 Wastewater Certification Review for Class C & D (3)
Preparation of students for the operator's certification test in wastewater at the C and D level. Topics include wastewater principles, mathematics, hydraulics, conventional treatment of wastewater, wastewater sedimentation, Colorado Water Quality Control Act, biological treatment of wastewater, effluent standards for wastewater, sludge handling and disposal, disinfection, pumps, safety, housekeeping, and laboratory analysis.

WQMS 126 Safety and Security Systems (3)
Exploration of all applied safety aspects in the water and wastewater industry. Topics include development of safety policies and programs, job safety orientation, driving practicies, CPR/First Aid, Permit Required Confined Spaces (PRCS), air monitoring and displacement requirements, treatment equipment, construction vehicles/equipment, chlorine and other chemical handling, and security and safety standards as determined by the Bioterrorism Preparedness Act of 2002.

WQMS 127 Water Quality Utility Management (3)
Introduction to the fundamental business practices that are utilized in managing a water or wastewater utility. Topics include the functions of a manager, planning, organizing, staffing, public relations, financial management, regulatory compliance, safety, and operations and maintenance from a management perspective.

WQMS 150 Troubleshooting in Water Quality (3)
Exploration of troubleshooting practices and procedures for chemical adjustments, equipment failures (electrical, mechanical, pneumatic and hydraulic), source contamination, system control procedures, and redundancies.

WQMS 202 Small Water Systems Operation and Maintenance (3)
Introduction to the practical, hands-on aspects of the safe and effective operation and maintenance of small water system collection, treatment, and disposal. Topics include the safe operation and maintenance of small water treatment plants, lift stations, and other facilities.

WQMS 203 Water Quality Small Wastewater Systems (3)
Introduction to the practical, hands-on aspects of the safe and effective operation and maintenance of small wastewater collection, treatment, and disposal systems. Topics include the safe operation and maintenance of small water treatment plants, lift stations and other facilities, and maintenance and rehabilitation of collection facilities for the small wastewater system operator.

WQMS 212 Drinking Water Regulations (4)
Knowledge and skills to establish a compliance program for a water treatment facility using ground water, surface water, or ground water influenced by surface water sources. The student will learn all regulatory requirements for microbiological and chemical contamination (organic,

inorganic, and radio) for monitoring and reporting operations.

WQMS 216 Biological and Bacteriological Water Quality Analyses (4)
Exploration of microorganisms associated with all phases and concerns of water and wastewater treatment including bacteria, protozoa, and algae. Topics include: microorganisms used in treatment, pathogenic indicators, regulations, health hazards and laboratory safety. Laboratory work involves media preparation, coliform testing, standard plate count, algae identification, activated sludge examination, volatile acids/alkalinity and biomonitoring.

WQMS 224 Water Certification Review for Class A & B (3)
Exploration of topics found on the state levels A and B certification exams. Topics include complex treatment techniques, administration and management, which include: recarbonation systems, lime and soda ash chemical softening, ion exchange, reverse osmosis systems, membrane filtration, corrosion control systems using sequestering agents, fluoridation techniques, and chemical taste and odor control techniques, as well as advanced operational mathematics.

WQMS 225 Wastewater Certification Review for Class A & B (3)
Exploration of topics found on the state levels A and B certification exams. Topics include complex treatment techniques, administration and management, which include: activated sludge processes, trickling filters, rotating biological contactors, digesters and Advanced Waste Treatment (AWT) systems. The student will learn advanced mathematical calculations to perform waste flow, solids volume percent concentrations, and Mean Cell Residence Times (MCRT).

WELDING (WELD)

WELD 110 Shielded Metal Arc Welding (4)
Study and skill development of safe practices, welding theory, and principles of Shielded Metal Arc Welding equipment and process. SMAW fillet welds in all positions on plate.

WELD 111 Shielded Metal Arc Welding 2 (4)
Study and skill development of safe practices, welding theory, and principles of Shielded Metal Arc Welding equipment and process. SMAW groove welds in all positions on plate. Pipe welding and stainless steel plate tests may be included. Prerequisite: WELD 110.

WELD 114 Oxy-Fuel Welding & Brazing (2)
Study and skill development of safe practices, welding theory, and principles of Oxy-Fuel equipment and process. Oxy-Fuel groove and fillet welding and braze welding will be included.

WELD 117 Oxy-Fuel and Plasma Arc Cutting (2)
Study and skill development of safe practices, theory, and principles of cutting equipment used in fabrication. Oxy-Acetylene Cutting (OAC), Plasma Arc Cutting (PAC), and other cutting processes applied to sheet metal, plate, piping, and other materials. Other uses of power tools and hand tools to be included.

WELD 133 Fabrication & Blueprints for Welders (4)
Study and skill development of metal fabrication methods. Lecture and laboratory. Measuring tools and techniques, welding shop mathematics, blueprint reading, welding symbols, sheet metal and steel plate fabrication project layout methods applied. Basic blacksmithing techniques and ornamental iron layout included. Structural and pipe connection layout methods introduced.

WELD 151 Introduction to Welding (3)
Introductory welding course. Lecture and laboratory. Safe practices, theory, principles, and use of welding and cutting equipment. Oxy/Fuel, Plasma Arc Cutting, Shielded Metal Arc Welding, Gas Metal Arc Welding, Flux Cored Arc Welding with sheet metal and carbon steel plate in most positions. Gas Tungsten Arc Welding may be included.

WELD 201 Gas Metal Arc Welding (4)
Study and skill development of safe practices, welding theory, and principles of Gas Metal Arc Welding equipment and process. GMAW fillet and groove welds with short circuit transfer and axial spray transfer will be included. GMAW pulse, aluminum, and stainless steel may be included.

WELD 203 Flux Cored Arc Welding (4)
Study and skill development of safe practices, welding theory, and principles of Flux Cored Arc Welding equipment and process. FCAW fillet and groove welds with self-shielded and gas-shielded processes will be covered.

WELD 230 Gas Tungsten Arc Welding (4)
Study and skill development of Gas Tungsten Arc Welding (GTAW/TIG). Lecture and laboratory. Safe practices, theory, principles and use of GTAW equipment. GTAW with sheet metal and carbon steel plate in most positions. Also, GTAW stainless steel and aluminum sheet metal in most positions. A.W. S. testing.

WELD 240 Pipe Welding (4)
Study and skill development of safe practices, welding theory, and principles of pipe welding using SMAW, GMAW, FCAW, and GTAW processes. AWS, API, and ASME weld procedures will be examined. Prerequisites: WELD 111, WELD 203, and WELD 230

WELD 261 Testing and Inspection (3)
Advanced classroom course on testing and weld inspection. Destructive and non-destructive weld testing methods applied. AWS bridge and structural codes, API cross country pipe welding codes, ASME pressure vessel and pressure piping codes. (On demand)

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

WELD 270 Practical Applications (3)
Exploration of a welding project course. Classroom discussions and directions with laboratory objectives. This class gives welding students the opportunity to apply techniques and knowledge gained from previous welding courses. With the guidance and advice of the instructor, students will fabricate a welding project of their choice.

WELD 275 Automation (4)
Study and skill development of safe practices, welding theory, and principles of robotic welding and CNC plasma cutting equipment and processes. Basic programming, setup, and systems integration will be included. Other automation equipment and processes may be included. Prerequisites: WELD 117 and WELD 201.

WELD 295 Independent Study (1-2)

WELD 296 Topics (1-3)

WELD 299 Internship (1-14)

WILDLAND FIRE MANAGEMENT (FSWM)

FSWM 100 Introduction to Wildland Fire Basic Fire Guard School (4)
Instruction in the primary environmental factors that affect the start and spread of wildfire and recognition of potentially hazardous situations. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training classes: S-110, S-130, S-190, I-100, L-180.

FSWM 103 Expanded Dispatch Recorder (1)
The structure of an expanded dispatch organization and how to effectively perform within that organization. Students will develop a working knowledge of the purpose and process of completing the resource order and other dispatch forms and learn established dispatch procedures. This course consists of the curriculum and activities included in the National Wildfire Group Firefighting Training classes: D-110.

FSWM 141 Introduction to Incident Information (2)
Cognitive material and skills needed to become type 3 information officers (IOF3). The course covers all aspects of establishing and maintaining an incident information operation, communicating with internal and external audiences to handling special situations. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training program class S-203.

FSWM 142 Portable Pumps and Water Use (2)
Introduction to the three areas of supply, delivery, and application of water. Students will be required to demonstrate their knowledge of correct water use, basic hydraulics, and equipment care. Modules support required set up, operation, and maintenance of pump equipment. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training classes: S-211.

FSWM 143 Wildfire Chain Saws (2)
Introduction to the function, maintenance and use of internal combustion, engine-powered chain saws and their tactical wildland fire application. Modules support entry-level training for firefighters with little or no previous experience in operating a chain saw and provides hands-on cutting in surroundings similar to fireline situations. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training classes: S-212.

FSWM 144 Fire Operations in the Wildland/Urban Interface (2)
Emphasizes the tactical decisions made by structure and wildland firefighters when confronting fire that threatens life, property, and improvements in the wildland/urban interface. Instructional units include interface awareness, size up, initial strategy and incident action plan, structure triage, structure protection tactics, incident action plan assessment and update, follow up and public relations, and firefighter safety in the interface. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training class: S-215.

FSWM 147 Ignition Operations (2)
Training in the functional roles and responsibilities connected with firing operations. The course covers planning, ignition procedures and techniques, and equipment applicable to wildland and prescribed fire. This course also addresses the role of the ignition specialist or firing boss as the organization manages escalation from a non-complex to a complex situation. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training class: S-234.

FSWM 148 Status/Check-In Recorder (1)
Introduces students to the tools and techniques used to perform duties of status check-in recorder (SCKN). The course provides an overview of what a student can expect if dispatched to an incident. Each student will need access to a computer that has the most current incident automation software. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training Program class S-248.

FSWM 151 Basic Air Operations (1)
Covers aircraft types and capabilities, aviation management and safety for flying in and working with agency aircraft, tactical and logistical uses of aircraft, and requirements for helicopter take-off and landing areas. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training class: S-270.

FSWM 152 Helicopter Crew Member (2)
Proficiency in all areas of the tactical and logistical use of helicopters to achieve efficiency and standardization. Topics include: aviation safety, aircraft capabilities and limitations, aviation life support equipment, aviation mishap reporting, pre-flight checklist and briefing/debriefing, aviation transportation of hazardous materials, crash survival, helicopter operations,

helicopter field exercise. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training program class S-271.

FSWM 153 Intermediate Wildland Fire Behavior (2)
Prepares the prospective supervisor to undertake safe and effective fire management operations. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training class: S-290.

FSWM 155 Initial Attack Incident Commander/Basic Incident Command System (2)
Required training for an ICT4 qualification. Course topics include Incident Command organization, functions and responsibilities, readiness, mobilization, size-up, planning, resource ordering, deployment, objectives, strategy, tactics, containment, administrative responsibilities, and post-incident evaluation. This course consists of the curriculum in the National Wildfire Coordinating Group Firefighting Training classes S-200 and I-200.

FSWM 156 Firefighter Type 1 and Fire Line Leadership (2)
Required training for Firefighter Type 1 qualification. Topics include fireline reference materials, communications, tactical decision making, leadership values and principles, transition challenges for new leaders, situational leadership, team cohesion factors, and ethical decision making. This course consists of the curriculum in the National Wildfire Coordination Group S-131 and L-280 courses.

FSWM 158 Driving for the Fire Service (2)
Familiarizes the students with the safety and regulations governing the driving practices and vehicle operations expectations in wildfire situations. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training program class S-216.

FSWM 162 Advanced Firefighter Position Task Book (3)
Documentation processes for the recording of routine and special activities in the field. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training program to include not less than 135 hours of documented activities.

FSWM 196 Topics (1-3)

FSWM 200 Extended Attack Incident Commander (1)
Covers the training needs of the incident commander type 3 (CT3). The six instructional units cover Information Gathering, Planning, Supporting Organization, Operations, Transitioning, and Demobilization/Adminstrative Requirement. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training program class S-300.

FSWM 204 Medical Unit Leader (1)
Covers the skills and information needed to perform in the role of medical unit leader (MEDL). This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training program class S-359.

FSWM 205 Introduction to Wildland Fire Behavior Calculations (2)
Covers the information and skills required for effective fire behavior prediction. This course introduces fire behavior calculations by manual methods, using nomograms. The student gains an understanding of the determinants of fire behavior through studying input (wind, slope, fuels, and fuel moisture). Students also learn how to interpret fire behavior output. Local and regional environment differences are stressed. This course consists of the curriculum and activities included in the National Wildfire Coordinating Group Firefighting Training program class S-390.

FSWM 278 Supervised Work Experience (3)

FSWM 296 Topics (1-3)

FSWM 299 Internship (3-8)

✓ This course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program. For more information please see page 55.

Administration

Colorado Mesa University Board of Trustees

(Date indicates year term expires.)

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University Administrators

TIMOTHY FOSTER (2004), President; BA, Kenyon College; JD, University of Denver

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CAROL FUTHEY (2004), Provost, Academic Affairs; BSEd, Slippery Rock State College; MA, Southern Illinois University-Edwardsville; PhD, University of Cincinnati

LAURA GLATT (2015), Vice President for Administrative Services and Finance; AA, Bismarck State College; BS, University of Mary; MM, University of Mary

MICHAEL MANSHEIM (2005), Director, Marketing and Publications; BBA, University of Miami; MS, Syracuse University

JOHN MARSHALL (2007), Vice President, Student Services; BA, Mesa State College; MPA, University of Colorado-Denver

ELIZABETH MEYER (2013), Vice President, Development/Foundation CEO; BA, University of Puget Sound

KRISTIN MORT (1994), Co-athletic Director/Senior Women Administrator; BA, Mesa State College; MA, Colorado Christian University

CYNTHIA PEMBERTON (2016), Vice President, Academic Affairs; BS, Willamette University; MS, Oregon State College; EdD, Portland State University

BRYAN ROOKS (1997), Co-athletic Director, Internal Operations, Compliance and Student Services; BS, Mesa State College

DEREK WAGNER (2009), Vice President, Intergovernmental and Community Affairs; BA, Mesa State College

Lowell Heiny Hall

Emeritus Faculty and Visiting Professors

Colorado Mesa University Recent Emeritus Faculty

(Date in parentheses indicates year of retirement. In accord with Faculty Senate action, this list is limited to faculty awarded emeritus status in the past 10 years.)

RICHARD BALLARD, BA, MS, PhD, Professor of Biology (2008)

CATHY BARKLEY, BS, MS, PhD, Professor of Mathematics (2010)

BRUCE BAUERLE, BA, MS, DA, Professor of Biology (2016)

RICHARD BERKEY, BA, MA, Associate Professor of English (2010)

CLARE BOULANGER, BS, MA, PhD, Professor of Anthropology (2014)

STEVEN BRADLEY, BA, MA, PhD, Professor of Art (2015)

JAMES BROCK, BS, MS, Associate Professor of Physical Sciences (2010)

ESTHER BROUGHTON, BA, MS, PhD, Professor of English (2008)

ADELE CUMMINGS, BA, MS, PhD, Professor of Sociology (2015)

HAROLD DAVENPORT, BS, MS, PhD, Professor of Mathematics (2010)

JACK DELMORE, BM, MM, DMA, Professor of Music (2017)

FORBES DAVIDSON, BS, PhD, Professor of Biological Sciences (2011)

ARUN EKTARE, PhD, Professor of Computer Science (2014)

BYRON EVERS, BS, MS, Associate Professor of Mass Communication (2013)

KAREN FORD, BA, MA, PHD, Professor of Psychology (2017)

SANDY FORREST, BSN, MSN, PhD, Professor of Nursing (2017)

JUDY GOODHART, RN, BS, MSN Professor of Nursing (2009)

ANDREW GORDON, BA, MA, PhD, Professor of Spanish (2012)

GIG LEADBETTER, BA, MS, PhD, Professor of Kinesiology (2015)

DANIEL FLENNIKEN, Associate Professor of Mass Communication (2017)

THOMAS GRAVES, BA, MA, EdD, Professor of Psychology (2007)

MYRA HEINRICH, BS, MA, PhD, Professor of Psychology (2014)

ROBERT JOHNSON, BA, MA, PhD, Professor of English (2010)

GARY LOOFT, Technical Instructor of Applied Technoogy - Transportation Services (2016)

LONGINO LUIS LOPEZ, BA, MA, PhD, Instructor of English (2012)

ROBERT MAYER, BA, MS, Assistant Professor of Business (2017)

GABRIELE MAYER-HUNKE, BS, BA, MS, MA, Instructor of English and German (2017)

GARY MCCALLISTER, BS, MS, DA, Professor of Biological Sciences (2014)

BETSY MCLOUGHLIN, BA, MA, PhD, Associate Professor of Spanish (2006)

JERRY MOORMAN, BS, MEd, EdD, Professor of Business (2013)

Veterans Memorial and the Gordon Gilbert bust outside Lowell Heiny Hall

LAVERNE MOSHER, BA, MFA Professor of Art (2009)

MAUREEN NEAL, BA, MA, PhD, Professor of English (2015)

TIMOTHY NOVOTNY, BA, BS, MA, MSBA, PhD, Professor of Mathematics and Statistics (2008)

KRISTINE REUSS, BSN, MSN, PhD, Professor of Nursing (2017)

JANINE RIDER, BA, MA, PhD, Professor of English (2007)

DAVID ROGERS, BA, MBA, Professor of Accounting (2012)

CHERYL ROY, BS, MSN, Associate Professor of Nursing (2010)

BETTE SCHANS, BS, MS, PhD, Professor of Radiologic Technology (2016)

GAYLA JO SLAUSON, BA, MBA, Associate Professor of Computer Information Systems (2017)

WILLIAM TIERNAN, BA, PhD, Professor of Physics (2017)

CYNTHIA THOMAS, BSN, MS, PhD, Associate Professor of Nursing (2011)

HEATHER WAGGONER, AA, BA, MFA, Professor of Theatre Arts (2015)

SUSAN YEAGER, BA, MS, PED, Professor of Kinesiology (2011)

MARY ZIMMERER, BA, MS, PhD, Professor of Business (2007)

Colorado Mesa University Visiting Professors

Aspinall Professors

CARL ABBOTT (1985), History; BA, Swarthmore College; MA, PhD, University of Chicago

WILLIAM BEEZLEY (2008), History; BA, Chico State College; MA, PhD, University of Nebraska

STEPHEN BENNET (1995), History; BS, MS, Illinois State University-Normal; PhD, University of Illinois, Urbana-Champaign

ALAN BLOCK (1996), History, Political Science, and Public Affairs; AB, PhD, University of California-Los Angeles; MA, California State University

PETER BLODGETT (2016), History; AB, Bowdoin College; MA, M. Phil, PhD, Yale University

PETER BOYLE (1989), History and American Studies; MA, Glasgow University, Scotland; PhD, University of California, Los Angeles

GEORGE BROWDER (2001), History; BS, Memphis State University; MA, PhD, University of Wisconsin at Madison

WILLIAM CHALOUPKA (2009), Political Science; BS, University of Nebraska; MA, Arizona State University; PhD, University of Hawaii

CORNELL CLAYTON (2014), BA, University of Utah, M.Ltt; D.Phil, Oxford University

WALKER CONNOR (1992), Political Science; John R Reitmayer Professor of Political Science, Trinity College

THOMAS DAVIS (2007), History; BA, Fordham University; MA, PhD, Columbia University; JD, State University of New York-Buffalo

ROGER DINGMAN (1991), History; BA, Stanford University; MA, PhD Harvard University

RICHARD W. ETULAIN (2010), History; AB, Northwest Nazarene College; MA, PhD, University of Oregon; DHL, Northwest Nazarene University

RICHARD FUNSTON (1987), Political Science; BA, MA, PhD, University of California-Los Angeles; JD, University of San Diego

ANDREW GULLIFORD (1997), History; BA, MAT, Colorado College; PhD, Bowling Green State University

GORDON MARTIN, JR (1998), Political Science, History, and Public Affairs; AB, Harvard College; JD, New York University

THOMAS MILLINGTON (2002), Political Science; BA, Williams College; MA, PhD, Johns Hopkins School of Advanced International Study

ROBERT MORTIMER (1986), Political Science; BA, Wesleyan University; MA, PhD, Columbia University

WILLIAM PARRISH (2000), History, Political Science and Public Affairs; BS, Kansas State University; MA, PhD, University of Missouri

EDWIN PERKINS (2003), History, Political Science, and Public Affairs; BA, College of William and Mary; MBA, University of Virginia; PhD, Johns Hopkins University

F. ROSS PETERSON (2015), History; BA, Utah State University, PhD Washington State University

GLENDA RILEY (1993), History, Political Science and Public Affairs; PhD, University of Ohio

PAMELA RINEY-KEHRBERG (1999), History; BA, Colorado College; MA, PhD, University of Wisconsin

WILLIAM ROBBINS (1990), History; BS, Western Connecticut; MA, PhD, University of Oregon

RANDOLPH ROTH (2012), History and Sociology; BA, Stanford University; PhD, Yale University

ADAM SOWARD, (2017), History; BA, University of Puget Sound; MA, PhD, Arizona State University

JEROME STEFFEN (1988), History; BS, University of Wisconsin, Madison; MA, Eastern Michigan University; PhD, University of Missouri

ZACHARY SMITH (1994), History, Political Science and Public Affairs; BA, California State University, Fullerton; MA, PhD, University of California, Santa Barbara

ROBERT WESTBROOK (2004), History; BA, Yale University; PhD, Stanford University

JOHN WILLS, JR. (2005), History; BA, University of Illinois; MA, PhD, Harvard University

PETER H. WOOD (2013), History; BA, Harvard University; BA, University of Oxford; PhD, Harvard University

Administrative Staff

See list online at
coloradomesa.edu/human-resources/employee-list

Campuses and Facilities

Colorado Mesa University's Main Campus encompasses 86 acres in the heart of Grand Junction, Colorado. Nestled between mountains and high-desert canyons, the area is home to some of the best outdoor recreation in the country and enjoys approximately 300 days of sunshine a year. Explore Colorado Mesa University's main campus virtually at future. coloradomesa.edu.

The **Tilman M. Bishop Campus**, located on Blichmann Avenue in the Foresight Industrial Park in Grand Junction, Colorado, is the result of a partnership among the University, Mesa County Valley School District 51, and area businesses. It is the main site of Colorado Mesa University's two-year division, Western Colorado Community College (WCCC). Programs at the Bishop Campus serve the technical education needs of both university and area high school students, as well as continuing/community education needs of industry and individuals.

Located at the base of the beautiful San Juan mountains, the **Montrose Campus** of Colorado Mesa University provides access to a variety of associate and bachelor degree programs in a scenic, smaller community campus setting. The Montrose Campus is located on South Cascade Avenue in Montrose, Colorado, and offers courses leading to the completion of selected associate of art (AA) degrees; bachelor of art (BA) degree completion tracks; essential learning classes, and selected upper-division and graduate-level classes.

Montrose Campus

The **South Facility/Industrial Energy Training Center**, located at 29 and D Roads in Grand Junction, Colorado, houses staff offices,

Houston Hall

training areas and classrooms for the electric lineworker program.

The **Whitewater Facility** houses CMU's Forensic Investigation Research Station.

Academic Buildings

Albers Hall (1935, 2008, 2012) houses staff offices for diversity, advocacy and health, as well as the mentoring program.

The **Archuleta Engineering Center (2009)**, located near the Bishop Campus in the Foresight Industrial Park, houses classrooms and offices for construction management, mechanical engineering, and machining technology programs. The center features an electrical lab, a computer lab and 9,200 square-feet of high bay learning labs.

Bishop Health Sciences (2013), located on the Bishop Campus, houses classroom and laboratory space for certificate and associate-degree programs in health sciences.

Building B (1997), located on the Bishop Campus, houses WCCC student service offices, Chez Lena restaurant,

Moss Performing Arts Center

Grand Mesa Hall; Fine Arts Building

and instructional space for culinary arts, computer-aided design, POST Academy and high school programs.

The **Campus Services Center (2007)** houses offices for purchasing, warehouse/receiving, and mailroom staff as well as offices, shops and storage areas for facilities staff.

Dominguez Hall (2008) houses modern classrooms, lecture auditoriums, small breakout rooms for student collaboration, faculty offices and features an outdoor patio as well as a coffee bar.

Engineering Building (2018)
The new 68,700 square-foot engineering building is slated to open in January 2018. It will house CMU's engineering programs, including the civil and mechanical engineering programs delivered at CMU through a partnership with the University of Colorado Boulder. The building will also be the newest home for the John McConnell Math & Science Center.

Escalante Hall (2014) The nearly 76,000-square-foot building is home to state-of-the-art classrooms, four computer labs, one open lab, several lecture style classrooms, numerous smaller seminar rooms, two television studios and offices for language, literature and mass communication faculty and staff. A state-of-the-art television production studio is part of the mass communication facilities. Escalante Hall is also home to KRMJ-TV, the Grand Junction affiliate of Rocky Mountain PBS.

Wubben Hall and Science Center

The **Fine Arts Building (2002)** provides studio laboratories, offices, and classrooms for studio art and graphic design. This facility has a large covered outdoor work area for ceramics kilns and a bronze foundry. The building design allows viewing of the studio activities from the hallways.

Health Sciences (2014, 2017), located on the north end of the Grand Junction campus, this building was once the home of Community Hospital. The building has been remodeled and now houses classrooms, a simulation center and laboratory space for health science students.

Houston Hall (1940, 2011), the first permanent building constructed on CMU's main campus, was renovated and expanded in 2010-2011 and includes classrooms and computer laboratories where a variety of subject areas are taught such as humanities and social and behavioral sciences.

Lowell Heiny Hall (1967) is a four-level building housing faculty and administrative offices remodeled in 1986-87. The garden level/first floor serves as a hub for student services

The Maverick Center

including the Registrar's Office, Financial Aid, Business Office, and the Advising and Career Center. The west side of the building features the **Gordon Gilbert Amphitheater** (dedicated 2009), an outdoor gathering/classroom space.

The **Maverick Center (2010)** houses the Department of Kinesiology, intercollegiate athletics and campus recreation facilities. Included in the Maverick Center are:

El Pomar Natatorium, one of the premier aquatic facilities in the Western United States, featuring a 50-meter competition pool that is ten lanes wide and eight feet deep, with two movable bulkheads. A diving well includes a pair of one- and three-meter boards. The natatorium also features water agitators and 3M sparger; a state-of-the-art Colorado Time Systems with speedlights and aqua-grip touch pads; Paragon sand top starting platforms with quickset anchors; a 21-foot by 10-foot digital display system; 22 loudspeakers that surround the pool; and 750 permanent balcony seats.

The Hamilton Recreation Center consists of a large fitness/strength training area equipped with weights and cardiovascular machines, a recreation gymnasium for intramural and club sports, two championship racquetball/wallyball courts, an indoor track and a 38-foot high climbing wall. The Center was expanded in 2014.

John U. Tomlinson Library

The Monfort Family Human Performance Lab is an integrative multi-use laboratory that features state-of-the art equipment and provides advanced physiological and biomechanical performance and wellness testing for students, faculty, staff and community members.

The Roe F. Saunders Field House, originally constructed in 1968 and expanded in 1996, provides facilities for a variety of physical education and recreation activities and includes Brownson Arena, a 2000-seat arena that surrounds the Wayne Nelson Court and is home to Colorado Mesa University's basketball, volleyball and wrestling teams.

The north end of the Maverick Center complex includes the Elliott Tennis Complex and Walker Field Stadium, home to Maverick tennis, soccer, and lacrosse. Immediately west of the complex are physical education and practice athletic fields, the Bus Bergman Field, and the Softball Stadium.

West side of Wubben Hall and Science Center

Maverick Pavilion (2014) hosts several indoor sport activities throughout the year and includes the Chamberlin Cycling Center and a climbing wall.

The **Moss Performing Arts Center (2002, 2009)** is home to performance venues, classrooms, choral and instrumental rehearsal rooms, dressing rooms, and offices. It features the Walter Walker Lobby (originally built in 1969); the 605-seat **William S. Robinson Theatre** with fly loft and modern drama lighting systems; the smaller, more intimate **Mesa Experimental Theatre**; and the 300-seat **Love Recital Hall**. A three-story addition to the south end includes a scene shop, a costume shop, and a dance studio.

Rotary Hall (1969, 2008, 2010, 2014), houses CMU's International Student Admissions and Programs Office.

The **John U. Tomlinson Library (1986, 2015)** expands the traditional library concept to include physical and electronic holdings and circulation of 365,000 library materials that are available in a variety of formats. About 23,000 journal titles are available via the library website and more than 20 million items are available through Prospector.

Wubben Hall and Science Center (1962, 2010) contains classrooms, laboratories, offices and storage areas for physical and life sciences, mathematics and computer sciences. A special feature is the Weldon Lecture Hall that seats 100 persons. This building was completely remodeled in 1998 and connected to the Science Center. In 2010, a three-story, 31,900 square-feet addition to the west of the existing facility expanded classroom and research space for the College's science programs.

The **Science Center** (1996, 2010) contains modern laboratories for biology, chemistry, geology and environmental sciences. This building also contains an electron microscopy laboratory and an herbarium. A special feature is the octagonal Saccomanno Lecture Hall that seats 120 persons and has full multimedia capabilities. An attractive courtyard between this building and Wubben Hall provides space for outdoor lectures and study. There is also a rooftop greenhouse that houses tropical vegetation for biology students to study.

Administrative Buildings

The **Admissions Welcome Center (2008)** houses offices for admissions staff responsible for assisting students with a smooth transition into their higher education experience. The Welcome Center offers multimedia meeting spaces for visitation programs and campus tours.

The **Outdoor Program (OP) Office** is Colorado Mesa University's headquarters for outdoor adventure and education. Located next to Residence Life, the OP office offers a gathering space and provides equipment rentals for biking, boating, camping, mountaineering, rock climbing, skiing, snowboarding and more.

Residence Life (2008), located directly across from the Admission Welcome Center and next to the Outdoor Program (OP), houses staff responsible for the on-campus living experience. In addition to providing educational events and activities, Residence Life helps to create safe, positive communities; offers leadership opportunities; and manages student behavioral concerns.

The **Kerry Youngblood Building (1992)**, located on the Bishop campus,

Admissions, Residence Life and the Outdoor Program

East side of North Avenue Hall

houses WCCC administrative offices and classrooms and laboratories for automotive and diesel technology, welding, process systems technology and technology integration.

Residence Halls

Bunting Hall (2011) is a co-ed, suite-style building that can accommodate up to 328 students. The building offers suites with standard double rooms, lofted doubles, singles, super single rooms.

Garfield Hall (2013, 2014, 2015) is a traditional style residence hall that offers accommodations for 435 residents in double bedrooms. Each floor boasts three lounges and a community kitchen.

Grand Mesa Hall (2006) houses 286 residents in suites with a mixture of single, super single and double bedrooms. Each suite has at least two bathrooms with separate counter and sink facilities. Suites are furnished with "bunkable" beds and movable furniture. The living area in each suite has comfortable seating and a 32" flat screen, wall-mounted television.

Monument Hall (1997) provides suite-style living and is designated as our Substance Free Hall. Students who request to live in Monument must sign a contract pledging to be substance free on and off campus. Monument Hall houses 180 residents in suites that share a bathroom. Each double-bed room is furnished with carpet and moveable furniture.

North Avenue Hall (2009) is configured in five or six-bed suites in the east wing and six-bed apartments in the north wing, and houses 304 residents.

Grand Mesa Hall

Orchard Avenue Apartments

University Center

Orchard Avenue Apartments (2012) offers fully furnished, three and six-person apartments for 185 students. Most apartments include individual balconies as well as large community rooms and balconies on each floor.

Piñon Hall (1967, 2015) was fully renovated in 2015, and houses 148 residents who have a strong interest in the Maverick Innovation Center. The Center is on the first floor of Piñon and open to business, computer science, engineering and physical science students and others who have a strong desire to bring their ideas to light! Piñon Residence will become the living space for many of these innovative students.

Rait Hall (1966) and **Tolman Hall (1966)** provide comfortable living quarters for 200 residents in each hall. Most rooms are doubles, but a few single rooms are available.

Walnut Ridge Apartments (1978) are furnished three- and four-bedroom apartments available to 120 sophomores, juniors, and seniors.

Wingate Hall (2016) is a traditional style residence housing 148 first- or second-year students who have a strong focus on academics. Each suite of two rooms features a lofted study room for the four residents. Community kitchens, bathrooms, study lounges, TV lounges and laundry are on each floor.

University Center interior

Community and Outdoor Spaces

The **University Center (2010)** is a two-story, 100,000 square-foot building and four-level parking structure that serves as the hub of campus life.

The facility features retail food service options; a convenience store; Starbucks®; Chick-fil-A®; a dining hall; an activity lounge for electronic gaming, pool tables, large screen TVs; and a Wells Fargo Banking® Center. The first floor of the center also houses the MAVcard Office; Career Services; an Information Desk/Parking Services customer service area; and a fireplace lounge with couches, chairs and tables.

The center's second floor houses offices for *The Criterion* newspaper, KMSA 91.3FM radio, the Campus Design Studio; and the Student Life offices that includes office and meeting spaces for Associated Student Government, Programming Activities Council, Club Advisory Board, and the Cultural Diversity Board. The building also features University Center administrative offices; the Meyer Ballroom; six meeting rooms, four of which have a small terrace facing the Elm Avenue Quad; and a large south-facing terrace.

The **Academic Quad** is the quadrangle surrounded by Wubben Hall to the north, Moss Performing Arts Center to the east, Houston Hall to the south, and Tomlinson Library to the west. Throughout the year it is used as one of the campus' major corridors, and as an outdoor meeting space for various campus events and activities.

The **Elm Avenue Quad** sits between Monument Hall, the Admissions Welcome Center, and Albers Hall. This space is utilized for many student activities throughout the year including the Homecoming bonfire, Piñon Palooza, and some all-campus barbecues. Students are regularly found here playing frisbee, tossing a football, or socializing. The quadrangle/pedestrian mall features "Where Rivers Meet" (2006), a fountain that seeks to portray the Grand Valley's history, geography and the legacy of the junction of the Colorado and Gunnison rivers.

Delta Field is located in front of the Fine Arts Building. The space is used throughout the year for various campus activities and contains expansive fields for intramural and club sports.

The **Development Center (2004)**, located on North Avenue at College Place, houses offices, storage space and the Little Mavericks Learning Center (2010) which offers childcare to Colorado Mesa University students, faculty, and staff.

The Plaza (2014) the central, ellipse-shaped open space in the heart of campus is bound on four sides by the University Center, Monument Hall, Escalante Hall and Dominguez Hall. It provides a venue for large-scale productions, events and recreational activities.

Glossary of Terms

ACADEMIC PROBATION - The failure of a student to meet the standards required for good standing. Student will be placed on academic probation for one semester and must maintain a 2.00 GPA or higher to avoid academic suspension.

ACADEMIC RENEWAL - Following an absence from the college of at least five years, a student may apply for "academic renewal." If approved, none of the course credits and grades earned at Colorado Mesa University prior to the five-year minimum absence will be used for meeting graduation requirements or in determining the student's grade point average.

ACADEMIC RESIDENCY - A specified minimum number of credit hours that must be earned at Colorado Mesa University to receive a degree.

ACADEMIC SUSPENSION - Denial of all registration privileges for a specified period of time (minimum one full semester) because of failure to meet minimum academic standards. Suspended students must be readmitted to the college before continuing enrollment.

ACADEMIC TERM - A period of instruction. During the fall and spring, the term is a standard 15-week semester. During the summer, various length periods of instruction are offered. The term regular semester refers to fall or spring semester.

ACADEMIC YEAR - The traditional cycle of academic terms: fall and spring.

ACCREDITATION - Certification that the university or program has met established standards and is recognized by appropriate accrediting agencies.

ADD/DROP - A period of time when students can alter class schedules by adding or dropping classes or changing sections of a course. Prior to the first day of the semester, schedule changes can be processed via the Web. Instructor signatures must be obtained beginning the first day of the classes through the specified ending date each semester.

ADMISSION - Status of students who have applied and have been accepted to the university.

ASSOCIATE'S DEGREE - Degree awarded upon satisfactory completion of a prescribed, planned program of approximately 60 credit hours. This can be completed in two years of study with an average of 15 semester hours per semester in the fall and spring terms.

AUDIT - A registration status which allows a student to attend and to participate in a course without benefit of a grade or academic credit. The "audit" status must be recorded in the Registrar's Office within the add/drop deadlines.

BACCALAUREATE DEGREE - Bachelor's degree: the traditional undergraduate degree. Awarded for completion of an undergraduate program of study, usually of 120 semester hours. This can be completed in four years of study with an average of 15 semester hours per semester in the fall and spring terms. Bachelor's degrees are comprised of essential learning courses, a major, and elective courses.

CAPSTONE - A course, project, paper, presentation, event, or exhibit that must be completed, usually in the senior year, before graduation. A capstone demonstrates in an integrated way everything that has been learned while pursuing a particular major.

COLLEGE OPPORTUNITY FUND (COF) - The method of funding state tax dollar support for students enrolled in Colorado public higher education via a voucher. Implemented in fall 2005, qualifying students create an account at the College Access Network into which the voucher is deposited and, upon registration by the student at a participating institution, then is transferred to the college.

CONCENTRATION - An area of interest within a major that is defined by a group of courses. Number of hours will vary by major. Concentrations are generally associated with 4 year programs (BA, BBA, BS, etc).

CONCURRENT STUDENT - A high school student who is registered for a university class.

CONTACT HOURS - The number of weekly hours student meets in a class, lab, studio, clinical, or class/lab.

COREQUISITE - Course(s) that must be taken concurrently with one or more additional courses. Subject matter often is similar or complementary.

COURSE LEVELS -
The numbering system of courses:

Developmental/Preparatory:
099 and lower
Lower Division:
100 - 199 Freshman
200 - 299 Sophomore
Upper Division:
300 - 399 Junior
400 - 499 Senior
Graduate:
500 and above

COURSE LOAD - The total number of semester hours registered for in a given academic term.

CUMULATIVE GRADE POINT AVERAGE - An average GPA calculated by dividing the total number of quality points/grade points obtained (credit hours X grade points) by the number of credit hours attempted during all academic sessions at Colorado Mesa University. Grades from other institutions are not included in the calculation.

DEAN'S LIST - Recognition of students who achieve a grade point average of between 3.50 and 3.99 while enrolled for a minimum of 12 semester hours in a fall or spring semester.

DEGREE - A title which the university confers on a student who has satisfactorily completed a required course of study. Degree requirements are established by the university and departments, and are approved by the university's faculty, administration, and authorized by the Colorado Commission on Higher Education. The university offers degrees at three levels: associate, baccalaureate, and master's.

DEGREE CATEGORY - One of three degree categories offered at Colorado Mesa University that may differ in lower division requirements beyond essential learning . These categories include the Bachelor of Arts (BA), Bachelor of Science (BS) and Professional, Technical or Other Programs (PTO).

DISCIPLINE - A recognized subject area or field of study within which courses are structured.

DISTANCE LEARNING - Courses offered for credit by an alternative means of delivery for students who need university credit but are unable to travel to campus on a regular weekly basis (e.g. telecourses, interactive video, or online).

DOUBLE MAJOR - Completing the requirements of more than one major within the same degree designation (e.g., a Bachelor of Arts, Bachelor of Science, Bachelor of Business Administration). A student could earn one baccalaureate degree with multiple majors (e.g., Bachelor of Arts with a double major in Psychology and Sociology). Students must meet all the requirements for the degree and for each major.

DUAL/DOUBLE BACCALAUREATE DEGREE - Completing the requirements of more than one major with different degree designations (e.g., a Bachelor of Arts, Bachelor of Science, Bachelor of Business Administration). A student earning two baccalaureate degrees (e.g., Bachelor of Arts in History and a Bachelor of Science in Mathematics) must meet all the requirements for each degree, each major, and additional requirements found in the "Undergraduate requirements section" for the second baccalaureate.

EARNED HOURS - Credit hours earned for college-level courses (numbered 100 and above) with a passing grade.

ELECTIVES - Courses selected at a student's discretion. Electives may be partially restricted, such as a selection from a specified group of courses identified to fulfill a particular requirement or they may be "free" electives which may be selected from any course for which the student has proper prerequisites. Electives provide opportunities for students to pursue personal interest and to gain general knowledge.

EMPHASIS - An area of interest within a major that is defined by a group of courses. Number of hours will vary by major. Emphases are generally associated with 2-year programs (AA, AS, etc.).

ENROLLMENT - Registration for course work and payment of fees constitutes official enrollment. For financial aid purposes, a student must enroll for 12 credit hours to be classified full-time; for other purposes, the minimum may be higher. For graduate students, a nine-hour load is typical for full-time classification.

ESSENTIAL LEARNING - A university-wide requirement of basic courses that form the foundation of all undergraduate degree programs. CMU's Essential Learning requirement was formerly named General Education.

Essential Learning Capstone - The baccalaureate 4 semester credit hour graduation requirement consisting of corequisite courses Maverick Milestone (3 hours) and Essential Speech (1 hour). This interdisciplinary requirement is designed to allow students to transition between the lower division Essential Learning Core courses and their upper-division major courses. Must be completed in the timeframes of 45 and 75 earned credit hours.

Essential Learning Core - Basic courses providing students with a foundation in the arts and sciences. The Essential Learning Core consists of 31 semester credit hours across the following disciplines: English (6 hours), Mathematics (3 hours), History (3 hours), Humanities (3 hours), Social and Behavioral Sciences (6 hours), Fine Arts (3 hours), and Natural Sciences (7 hours).

ESSENTIAL SPEECH - A 200-level, 1 semester credit hour course which provides students with the tools for verbally presenting ideas and information learned in the corequisite Maverick Milestone course. The Maverick Milestone and Essential Speech corequisite courses comprise the Essential Learning Capstone requirement for baccalaureate students. See Essential Learning.

GENERAL EDUCATION - Former designation of CMU's Essential Learning curriculum.

GENERAL EDUCATIONAL DEVELOPMENT (GED) DIPLOMA - Award granted upon passing tests that measure student learning normally acquired by completing a typical high school program of study.

GOOD STANDING - A sliding scale of academic status achieved by students for semester hours attempted. Determines eligibility of students to continue to register for university course work.

GRADE IMPROVEMENT - Repeat of any course more than once for academic credit at Colorado Mesa University done so only for "grade improvement." Academic credit is awarded only once and the best grade received is the one used to compute the student's cumulative grade point average and to fulfill requirements for the degree. Some exceptions to this policy apply.

GRADE POINT AVERAGE (GPA) - A measure of a student's academic performance which is computed by dividing credit hours attempted into grade points earned to determine the mean average grade of all courses taken for credit. Does not include courses taken as pass/fail.

GRADUATE CERTIFICATES – Contain graduate level (5xx-7xx) courses. A student must be admitted as a graduate student to attempt a graduate certificate.

GRADUATE STUDENT - A student who has earned a baccalaureate degree and who is pursuing a master's degree program.

GRADUATION HONORS - Recognition of graduating students who meet the following academic criteria:

- With Distinction - Associate degree graduates with cumulative grade point averages of 3.50 to 3.74.
- With High Distinction - Associate degree graduates with cumulative grade point averages of 3.75 to 4.00.
- Cum Laude - Baccalaureate degree graduates with cumulative grade point averages of 3.50 to 3.74.
- Magna Cum Laude - Baccalaureate degree graduates with cumulative grade point averages of 3.75 to 3.89.

- Summa Cum Laude - Baccalaureate degree graduates with cumulative grade point averages of 3.90 to 4.00.

HIGHER EDUCATION ADMISSION REQUIREMENTS (HEAR) (also referred to as the pre-collegiate curriculum) - Requirements established by the Colorado Commission on Higher Education for students graduating from high school in spring 2008 or later and seeking admission to a Colorado public four-year college or university.

INDEPENDENT STUDY - An upper-division course designated by a special number within a discipline. Allows a student to pursue an individual project independently, for credit, under the supervision of an instructor. Requires consent of the instructor.

LEVELING COURSES - A set of equivalent courses for graduate students who have not completed specific undergraduate courses prior to beginning graduate study.

LOWER DIVISION COURSE - A course that carries a 100 - 199 or 200 - 299 number.

MAJOR - A set of required courses from one or more departments in a subject chosen as the student's principal field of study. Designed to provide students with the knowledge, skills, and experiences necessary to pursue a specific career and/or advanced study.

MASTER'S DEGREE - A post-baccalaureate degree. All master's degree candidates must maintain a 3.00 GPA to remain in good academic standing.

MATRICULATION - Enrollment as an admitted, degree-seeking student.

MAVERICK MILESTONE - A 200-level interdisciplinary, topics-oriented, writing-intensive course designed to help students develop the ability to approach problems and evaluate ideas using more than one set of intellectual tools. This 3 semester credit hour course and its 1 semester credit hour corequisite Essential Speech comprise the Essential Learning Capstone requirement for baccalaureate students. See Essential Learning.

MINOR - An officially-recognized secondary field of study requiring fewer units than the major. A minor must be in an approved subject area and is less comprehensive than the major.

MULTIPLE CONCENTRATIONS - Completing the requirements of more than one concentration within the same major (e.g., Bachelor of Arts in Mass Communication with a double concentration in Print Media and Public Relations). Students must meet all the requirements for the degree, major, and each concentration.

PREREQUISITE - Requirement(s) that must be taken and passed before a higher level course may be taken. Sometimes, permission of the instructor or another requirement (such as graduate status) may be a prerequisite for a course. Prerequisites may include: (1) Course or courses that must be completed before a higher-level course may be taken, sometimes allowed by the instructor to be taken concurrently; (2) Courses outside the major department that must be completed before admission to the major; (3) Successful completion of high school courses (as in languages); (4) Minimum SAT or ACT scores or sub-scores; (5) Minimum placement test scores; or (6) Acceptance into a certain program.

PRESIDENT'S LIST - Recognition of students who achieve a grade point average of 4.00 while enrolled for a minimum of 12 semester hours in a fall or spring semester.

PRIORITY REGISTRATION - Designated period of early registration for currently enrolled students.

PROFESSIONAL CERTIFICATE – A Professional Certificate contains primarily upper division (3xx-4xx) courses. For a student to attempt a Professional Certificate after the student has earned a baccalaureate degree, the student must be admitted to study as a post-baccalaureate student or as a graduate student.

PROGRAM SHEET - A document listing degree requirements for graduation.

QUALITY POINTS - The number points attributed to a grade (A=4, B=3, C=2, etc.) times the number of credit hours in the course.

REGISTRAR - Office responsible for registering students into classes, maintaining academic records, and certifying degree requirements for graduation.

STUDENT CLASSIFICATION - Student level based on the number of semester hours successfully completed as follows:

0 - 30	Freshman
31 - 60	Sophomore
61 - 90	Junior
91 - above	Senior

TECHNICAL CERTIFICATE - Award for the completion of technical coursework designed to train students for specific skills required for employment in various vocational occupations.

TOPICS COURSES - Courses offered from time to time that contain material of special interest within a specific discipline not considered elsewhere in the curriculum. Prerequisites vary with course material, and enrollment requires consent of the instructor.

TRANSCRIPT - An official document issued by the Registrar that lists the entire academic record of a student at the university.

TRANSFER CREDIT - Course work completed at another institution that is accepted for credit toward a degree at the university. Grades from these courses are not included in calculation of a student's cumulative GPA.

UNDERGRADUATE - A student working toward a technical certificate, an associate degree, or a baccalaureate degree.

UPPER LEVEL COURSE - A course that carries a 300 - 399 or 400 - 499 number.

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Campus Directory

The campus operator can be reached during business hours at 970.248.1020 or toll-free 800.982.MESA.

OFFICE	LOCATION	PHONE
Academic Affairs	LHH 209	248.1881
Academic Departments		
Main Campus:		
Art & Design	FA 200	248.1833
Biological Sciences	WS 232	248.1993
Business	DH 309	248.1778
Computer Science, Mathematics, & Statistics	WS 132	248.1407
Health Sciences	MC 169	248.1398
Kinesiology	MC 237	248.1635
Languages, Literature, & Mass Communication	EH 237	248.1687
Music	MPAC 113	248.1233
Physical & Environmental Sciences	WS 232	248.1993
Social & Behavioral Sciences	LHH 413	248.1696
Teacher Education	DH 109	248.1786
Theatre Arts	MPAC 113	248.1233
Montrose Campus	MONT	970.249.7009
Bishop Campus		
Western Colo. Comm. Collge	2508 Blichmann	255.2600
Advising Center	LHH 127	248.1177
Admissions Office	AO	248.1875
Alumni Association	1450 N 12th	248.1525
Associated Student Government	UC 212	248.1762
Athletics	MC 229	248.1503
Bookstore	UC 130	248.1422
Box Office	MPAC	248.1604
Career Services	UC 106E	248.1404
Campus Dining	UC 115	248.1742
CMU Foundation	1450 N 12th	248.1295
Community Education Center	WCCC (BB185)	255.2800
Criterion Newspaper	UC 211	248.1255
DNP Program	MC 167	248.1398
Distance Education	CSA 106	248.1384
Diversity, Advocacy and Health	A	248.1765
Educational Access Services	H 108	248.1856
Facilities Services	CSA	248.1465
Financial & Administrative Svcs	LHH 252	248.1804
Financial Aid	LHH 121	248.1396
Graduation Information	LHH 121	248.1555
Hamilton Recreation Center	MC 150	248.1592
Honors Program	see Academic Department	
Human Resources	LHH 237	248.1820
Industrial Education Training Cntr	2980 D Rd	248.1372
Institutional Research & Assessment	LHH 221	248.1884
KMSA/91.3FM	UC 201-209	248.1240
Library	L.	248.1862
Little Mavs Learning Center	DEVCTR.	248.1318
Toddler Tech	DEVCTR.	248.1086
MA in Ed Program	DH 109	248.1786
MBA Program	DH 309	248.1778
MSN Program	MC 167	248.1398
Marketing	LHH 450	248.1412
MAVcard Office	UC 106	248.1059
Maverick Innovation Center	PH	248.1536
Outdoor Program	OP	248.1428
Parking Services	UC 106 D.	248.1921
Police/Public Safety, Non-Emergency (GJPD Substation)	UC 110	242.6707
President's Office	LHH 301	248.1498
Registrar's Office	LHH 116	248.1555
Residence Life	RL 100	248.1536
Residence Halls:		
Bunting Hall		248.2192
Garfield Hall		248.1536
Grand Mesa Hall		248.2170
Monument Hall		248.2160
North Avenue Hall		248.2180
Orchard Avenue Apartments		248.2196
Piñon Hall (Maverick Innovation Center)		248.1793
Rait Hall		248.2151
Tolman Hall		248.2154
Walnut Ridge Apartments		248.2190
Wingate Hall		248.2165
Student Accounts	LHH 101	248.1567
Student Services	LHH 107	248.1366
Student Success	A 106	248.1340
Student Wellness Center	1060 Orchard, Ste O	256.6345
Technology Help Desk	L 142	248.2111
Testing Center	H 125	248.1260
Transfer Services	AO	248.1232
Tuition Classification Officer	AO.	248.1458
Tutorial Learning Center	H 110	248.1392
University Center Information Desk	UC 106A	248.1758
WCCC Student Services	WCCC (BB 102).	255.2670

LOCATION Legend

A .....Albers Hall
AO .....Admissions Welcome Center
BISH.....Tilman M. Bishop Campus (WCCC)
CSA.....Campus Services Administration
CSA.....Facilities Services
DEVCTR.....Development Center
DH .....Dominguez Hall
EH.....Escalante Hall
FA .....Fine Arts
H.....Houston Hall
HSN .....Student Health Center
IETC .....Industrial Educ Training Center
L.....Tomlinson Library
LHH.....Lowell Heiny Hall
MC.....Maverick Center
MAVP.....Maverick Pavilion
MONT ....Montrose Campus
MPAC.....Moss Performing Arts Center
PH.....Piñon Hall
RL.....Residence Life & Outdoor Program Offices
UC.....University Center
WCCC.....Western Colorado Community College
WS .....Wubben Hall and Science Center

OFF CAMPUS

WESTERN COLORADO
COMMUNITY COLLEGE
A Division of Colorado Mesa University

Western Colorado Community College
2508 Blichmann Avenue
Grand Junction, CO 81505
970.255.2600

COLORADO MESA
UNIVERSITY
MONTROSE CAMPUS

Colorado Mesa University at Montrose
245 South Cascasde Avenue
Montrose, CO 81401
970.249.7009

MAIN CAMPUS

MAP LEGEND

Building (code) . . . . . Number

Academic Quad 2
Admissions Welcome Center (AO) 3
Albers Hall (AH) 4
Diversity, Advocacy and Health; Office of Student Success
Alumni Association (A/F) 5
Alumni Field 44
Basketball Court 41
Bergman Practice Field 6
Bunting Hall (BH) 7
Campus Services, Facilities (CSA) 8
Mail Room, Purchasing, Maintenance Shops
Delta Field 37
Development Center (DEVCTR) 9
Little Mavericks Learning Center
Dominguez Hall (DH) 1
Elliott Tennis Complex 10
Elm Avenue Quad 11
Engineering Building 47
John McConnell Math and Science Center
Escalante Hall (EH) 39
Fine Arts Building (FA) 13
Football Practice Field 14
Foundation (A/F) 5
Garfield Hall (GH) 38
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Grand Mesa Hall (GMH) 15
Health Sciences 46
Houston Hall (H) 16
Educational Access Services (EAS), Testing Center, Tutorial Learning Center (TLC)
Lowell Heiny Hall (LHH) 17
Advising Center, Accounting and Financial Services, Financial Aid, Human Resources, President's Office, Registrar's Office, Student Services
Maverick Center (MC) 19
Brownson Arena, El Pomar Natatorium, Hamilton Recreation Center, Health Sciences Center, Monfort Family Human Performance Lab, Saunders Field House
Maverick Pavilion (MAVP) 20
Monument Hall (MH) 21
Moss Performing Arts Center (MPAC) 22
Box Office, Mesa Experimental Theatre (MET), Love Recital Hall, Robinson Theatre
North Avenue Hall (NAH) 23
Orchard Avenue Apartments (OAA) 36
Outdoor Program 24
Piñon Hall (PH) 25
Maverick Innovation Center
Plaza 42
Rait Hall (MRH) 18
Residence Life Center (RL) 24
Rotary Hall (ROH) 12
Rugby Field 40
Sand Volleyball Courts 43
Softball Complex 26
Stocker Stadium 27
Student Wellness Center 28
Suplizio Field 29
Tolman Hall (TH) 30

Colorado Mesa University
1100 North Avenue
Grand Junction, CO 81501
970.248.1020

- Campus Buildings
- Construction
- Campus Police
- Parking
- City Buildings

Tomlinson Library (L) 31
Distance Education, Dining Hall, IT Help Desk
Walker Field Stadium 32
Walnut Ridge Apartments (WR) 33
Wingate Hall (WH) 45
Wubben Hall and Science Center (WS) 34
University Center (UC) 35
Bookcliff Café, Bookstore, Career Services, Chick Fil A, Dining Hall, Game Room, MAVcard Office, The Maverick Store, Meyer Ballroom, Parking Services, The Point, Rowdy's, Starbucks, Student Life, Flat Top Grill

ACADEMIC AFFAIRS

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COLORADO MESA UNIVERSITY

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