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2015-2016 CATALOG

WELCOME TO FRONT RANGE COMMUNITY COLLEGE

Our No. 1 priority is student success. We believe that learning is a partnership among students, faculty, and staff, and we are dedicated to providing opportunities for diverse learners and communities. Here are a few of the ways we focus on your success:

We prepare you for the "real world."

Our associate degrees and certificate programs train students for careers in well-established and emerging industries. In 2014, we opened a \$10 million Advanced Technology Center with state-of-the-art precision machining equipment. Health Information Technology is preparing students as the health-care industry converts to electronic records.

Your credits are guaranteed to transfer.

Our general education courses and our Associate of Arts (A.A.) and Associate of Science (A.S.) degrees are guaranteed to transfer to the colleges of arts and sciences at all public four-year colleges and universities in Colorado. You also can graduate from FRCC with a degree with designation in one of 25 pathways that are guaranteed to give you junior standing at public colleges and universities in Colorado. In addition, special statewide transfer agreements guarantee that many credits will transfer in fields such as early childhood education, elementary education, and nursing. With all these transfer opportunities and FRCC's reputation for academic rigor and excellence, it's no wonder FRCC is the number one transfer institution for Colorado State University and the University of Colorado at Boulder. We also have transfer agreements with Colorado School of Mines, Regis University, and the University of Denver. When you transfer, our studies show that FRCC students do as well at four-year schools as the students who start there.

Our faculty are dedicated to teaching and learning.

Our devoted, highly educated faculty are passionate about teaching and student success. At FRCC, classes are small enough that instructors know your name - and can help you get to where you want to go.

We're cutting-edge.

FRCC's classrooms and labs employ some of the best technology in the state. Students work with the latest software and computer equipment, and our state-of-the-art facilities ensure teaching is always at the leading edge.

We partner with high schools.

Our Gateway to College and College Now programs, which allow students to earn high school and college credit simultaneously, are just a few examples of FRCC's commitment to helping young students better their lives through education.

Our students come from all walks of life.

FRCC students come from a wide range of ethnic, socioeconomic, and educational backgrounds. From freshmen coming straight from high school to adult students seeking to further their careers, we embrace diversity.

We'll help you figure it all out.

If you're unsure of what you want to do, our academic advisors will help you determine your goals, choose classes, and plan your career. If you're concerned that you're not ready for college-level class work, redesigned developmental English and math courses prepare you in one semester. A number of those classes are "learning communities" where your teachers and fellow students support you toward success. We also provide tutoring, study skills seminars, math, and science drop-in help centers, and a number of other support services.

At FRCC, you'll save a bundle.

Starting your education at FRCC will save you thousands of dollars in tuition, helping you reach your career and life goals affordably. If you are a Colorado resident, apply for the College Opportunity Fund to cover part of your tuition.

We help you succeed.

FRCC has programs and resources that will help you thrive - and have fun while you're at it. Our service learning and mentorship programs enhance your experience. We also believe that not all learning takes place in the classroom. Clubs and student activities, including leadership development programs, offer opportunities to lead and learn. Talk with a Student Life professional.

On behalf of all of our staff and faculty, I welcome you to Front Range Community College. When it comes to focusing on your success, FRCC is unmatched. I am excited that you have chosen to partner with us as you begin or continue your educational journey.

Andy Dorsey, President

2015-2016: Academic Calendar

Calendar dates are subject to change without notice. To access drop and withdrawal dates, go to eWOLF, the Student Tab, Registration Tools box and click on the link "Detailed Student Schedule" (with drop & withdrawal dates) or go to www.frontrange.edu/calendar/.

Summer Semester

10-Week Classes	May 26 - August 3
1st 5-Week Classes	May 26 - June 29
2nd 5-Week Classes	June 30 - August 3
Weekend Classes	May 29 - August 2
INDEPENDENCE DAY HOLIDAY	NO CLASSES July 3-4 College Closed July 3-4

Fall Semester

15-Week Classes	August 24 - December 14
1st 10-Week Classes	August 24 - November 2
2nd 10-Week Classes	September 29 - December 14
1st 5-Week Classes	August 24 - September 28

2nd 5-Week Classes	September 29 - November 2
3rd 5-Week Classes	November 3 - December 14
1st 7-1/2-Week Classes	August 24 - October 14
2nd 7-1/2-Week Classes	October 15 - December 14
1st 12-Week Classes	August 24 - November 16
2nd 12-Week Classes	September 15 - December 14
Weekend Classes	August 21 - December 13
LABOR DAY HOLIDAY	NO CLASSES September 5-7 College Closed September 7
THANKSGIVING HOLIDAY	NO CLASSES November 23 - November 29 College Closed November 26

Spring Semester

15-Week Classes	January 19 - May 9
1st 10-Week Classes	January 19 - April 4
2nd 10-Week Classes	February 23 - May 9
1st 5-Week Classes	January 19 - February 22
2nd 5-Week Classes	February 23 - April 4
3rd 5-Week Classes	April 6 - May 9
1st 7-1/2-Week Classes	January 19 - March 9
2nd 7-1/2-Week Classes	March 10 - May 9
1st 12-Week Classes	January 19 - April 18
2nd 12-Week Classes	February 9 - May 9
Weekend Classes	January 22 - May 8
MARTIN LUTHER KING, JR. HOLIDAY	January 18 NO CLASSES College Open

Spring Break 2016

Larimer Campus	March 14 - 20 NO CLASSES College Open
Boulder County Campus	March 21 - 27 NO CLASSES College Open
Westminster Campus/Brighton Center	March 21 - 27 NO CLASSES College Open

Commencement 2016

Boulder County Campus	May 11
Larimer Campus	May 10
Westminster Campus/Brighton Center	May 12

Which Catalog to Use

This catalog is effective beginning Summer Semester 2015 for students enrolling at Front Range Community College for the first time. Continuing students who have not had a 12-month lapse in enrollment will be allowed to use the requirements listed in any catalog published while continuously attending the college. Students may not combine requirements from multiple catalogs in order to graduate.

Other Formats Available

This publication is available in alternate formats. Call 303-404-5000 for availability.

Where to Find Catalog Updates

This catalog is true and accurate at the time of publication. Front Range Community College reserves the right to change provisions, requirements, and/or fees listed in this catalog.

Additions and changes may occur because of updates to state or federal law, CCCS policies or procedures, college regulations or accreditation requirements. Updates, changes and addenda to this catalog can be found on the FRCC website: www.frontrange.edu/catalog.

Nothing in this catalog is intended to create (nor shall be construed as creating) an expressed or implied contract. The College reserves the right to modify, change, delete, or add to, as it deems appropriate, the policies, procedures, and other general information in this catalog.

ABOUT FRCC

Purpose

As an institution of higher education, Front Range Community College serves anyone who can benefit from college preparatory and two-year college-level credit instruction. We provide education and training, both in general education and in occupational areas, which may lead to a certificate; an associate degree in Applied Science, Arts, Science, or General Studies; or transfer to a four-year institution.

We serve individuals who benefit from non-credit instruction for personal and professional development, recreation and fitness, and individual and family enrichment.

We serve employees of local businesses and industries who benefit from workplace skills development from customized and/or credit-generating courses.

We serve all individuals in our communities by developing and enriching the local economy and culture.

Core Values

- **We value students.**

We value them as people, as learners, and for the diverse perspectives they contribute.

- **We value teaching and learning.**

We value exceptional teaching in a dynamic and varied learning environment.

- **We value community.**

We value a sense of community and collaboration in partnerships. We identify ourselves as one college that supports many communities.

- **We value employees.**

We value the commitment, knowledge, diversity, and uniqueness of our employees. We value the strengths of our employees, as well as their potential.

Mission and Strategic Plan

Our Mission

At Front Range Community College, we enrich lives through learning.

Our Vision

Our vision is that all students at Front Range Community College will accomplish their educational and career goals. We will be recognized for our singular focus on student success, our exceptional teaching, our strong commitment to diverse learners and communities, and our effective business and community partnerships.

Our Strategic Priorities

Student Success

FRCC supports and improves student persistence and completion through instructional excellence, exceptional student support services, and a commitment to the understanding that learning happens everywhere. Faculty, instructors, and staff are well-versed in the scholarship of teaching and learning as it relates to

their area of expertise, and receive meaningful professional development and training to enhance their respective practices and support innovation. We improve student success with careful assessment and measurement and a commitment to using data to make effective decisions.

Opportunities for Diverse Learners and Communities

Our student body reflects the diversity of our communities because we create learning environments that welcome diversity in all its forms and actively engage the growing minority communities in our service area. All students benefit from our college services, which are welcoming, easy to navigate, and focused on learning, growth, and development of the whole student.

Strong Partnerships

We are the first-choice educational partner for industry, K-12 education, and community organizations. Local businesses value us for our high-quality instructional services that respond to immediate and long-term industry needs. We work closely with our business and community partners to educate and train highly qualified employees, develop a strong regional workforce, and identify opportunities for appropriate and responsible program development; consequently, the state of Colorado views us as a vital component of building a robust workforce.

Culture of Collaboration, Innovation, and Pride

We recognize that the success of this plan rests on the success of our employees and their ability to be responsive, dynamic, and creative. We are committed to a culture that supports innovation, creativity, collaboration, healthy work-life balance, and excellence in all that we do. We support and encourage additional staff training and professional development. We invest appropriately in additional staff whenever possible and necessary to provide quality service to students and work-life balance for our employees.

Resource Development and Sustainability

We are mindful of the importance of holding our institution in trust for future generations. To that end, we invest in safe, appealing facilities that meet student and staff needs and are viable in the long-term on all campuses. We also continue to be committed to fiscal responsibility and efficiency in all operations. With state funding uncertain, we invest in successful grant development and fundraising to broaden our funding sources.

Instructional Philosophy Statement

General education, transfer education, and career/technical education programs are fundamental to Front Range Community College's focus on student access and success, and are central to college planning, resource allocation, and accountability.

General Education is intended to impart common knowledge, intellectual concepts, and attitudes that every person should possess to be successful in employment, baccalaureate and professional programs, and responsible citizenship.

Transfer education is an integral part of FRCC's general educational commitment. The college ensures that the scope, content, and academic rigor of its transfer courses and programs

meet or exceed the state policies, standards, and practices for transfer education, and provide students with an appropriate undergraduate experience.

Career/Technical Education at the college strives to provide specific skills and general knowledge to stay abreast of emerging technologies in a rapidly changing environment and promote overall success in the workplace.

Assessment of Student Learning

Assessment is used to evaluate the effectiveness of the college in meeting its educational purposes and to provide data for improvements in programs, curricula, and teaching. Under this ongoing plan, FRCC assesses whether students:

- Demonstrate competency in Student Learning Outcomes of general education.
- Master the occupational/technical skills required in specific programs.
- Acquire the academic background for successful performance at four-year colleges and universities.

Student Learning Outcomes

FRCC's Student Learning Outcomes (SLO) are five basic skills we believe students should possess in order to succeed in their jobs, further education, and life. The five SLOs are:

- **Critical Thinking:** Students interpret, analyze, evaluate, and infer from their own thinking and that of others in order to form well-reasoned and informed conclusions.
- **Effective Communication:** Students construct clear written and spoken messages demonstrating understanding of audience and context, including response to verbal and nonverbal feedback.
- **Information and Technology Literacy:** Students reflectively locate, organize, analyze, evaluate, and apply information across multiple forms of media to a defined question or problem.
- **Professionalism:** Students demonstrate appropriate work-ethic traits through personal conduct and effective teamwork.
- **Quantitative Reasoning:** Students calculate, represent, interpret, analyze, apply, evaluate, and communicate numerical information.

College Completion, Transfer, and Retention Rates

The Office of Institutional Research at FRCC collects, manages, analyzes and reports data for the purpose of supporting and anticipating the needs of the communities we serve, meeting external mandates and supporting college-wide decision and policy making. For current and historical information on Front Range Community College student completion, transfer, and retention rates, go to <http://www.frontrange.edu/About-Us/Institutional-Research/>.

Colorado Guaranteed Transfer We Guarantee Your Transfer

To help eliminate the guesswork of transferring course credits and associate's degrees, Colorado has developed a statewide

guaranteed transfer program called gtPathways (guaranteed transfer pathways) and many statewide articulation agreements. For more information, go to <http://highered.colorado.gov/Academics/Transfers/Students.html>.

gtPathways

gtPathways applies to all Colorado public colleges and universities, with more than 1,000 lower-division general education courses in 20 subject areas guaranteed to transfer. After starting at Front Range Community College or another public college or university in Colorado and, upon acceptance to another, you can transfer up to 31 credits of previously and successfully (C- or better) completed gtPathways coursework. These courses will automatically transfer with you and continue to count toward your general education core or graduation requirements for any liberal arts or science associate's or bachelor's degree. You should check with the school you wish to attend so you are clear about which credits will transfer beyond any that are guaranteed by gtPathways. For a complete and updated list of gtPathways curriculum, go to <http://highered.colorado.gov/Academics/Transfers/gtPathways/Curriculum.html>

Statewide Transfer Articulation Agreements

The purpose of a statewide transfer articulation agreement is to identify the courses a student at Front Range Community College must complete as part of an Associate of Arts (A.A.) or Associate of Science (A.S.) degree to be guaranteed to be able to complete a bachelor's degree program (B.A. or B.S.) at any public four-year college or university that offers that bachelor's degree program. Again, you should check with the community college where you start and the 4-year school you wish to transfer into to ensure you are registering for the appropriate courses. For a complete and updated list of statewide transfer articulation agreements, go to <http://highered.colorado.gov/Academics/Transfers/>

Institutional Transfer Guides

Besides gtPathways and the articulation and transfer agreements listed above, many colleges and universities have other transfer agreements that may apply to you. If you complete an Associate of Arts or Associate of Science degree, 60 credit hours of your A.A. or A.S. degree are guaranteed to transfer to a four-year school, once you are accepted for admission. And, you may be able to finish a Bachelor of Arts or Bachelor of Science degree within another 60 credit hours. Note that some bachelor's degrees require more than an additional 60 credits to complete. When in doubt, speak to an advisor or go to <http://highered.colorado.gov/Academics/Transfers/Students.html>.

Student Bill of Rights

In an effort to enhance the transferability of credit and general education, the Colorado legislature implemented a policy to assure students enrolled in public institutions of higher education are afforded certain basic rights. Known as the Student Bill of Rights, its provisions seek to ensure:

- A quality general education experience that develops competencies in reading, writing, mathematics, technology, and critical thinking through integrated arts and science experience.

- Students should be able to complete their Associate of Arts and Associate of Science Degree programs in no more than 60 credit hours or their baccalaureate programs in no more than 120 credit hours unless there are additional degree requirements recognized by the commission.
- A student may 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.
- Students have a right to clear and concise information concerning which courses must be completed successfully to complete their degrees.
- Students have a right to know which courses are transferable among the state's public two-year and four-year institutions of higher education.
- 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.
- Students have the right to know if courses from one or more public higher education institutions satisfy the student's graduation requirements.
- Credit for completion of the core requirements and core courses shall not expire for 10 years from the date of initial enrollment and shall be transferable.

Transferring Credit to Four-Year Schools

Students who select an Associate of Arts or Associate of Science Degree are generally interested in pursuing their education by transferring to four-year institutions. It is important to note:

1. Students who have graduated from a community college have fewer transfer difficulties than those who transfer without graduating.
2. The transfer of "D" credits is dependent upon the policy of each institution. "D" credit in the A.A. and A.S. degrees will invalidate the guaranteed transfer of those degrees. "D" grades earned after September 1, 2005 will not be applicable to A.A., A.S., and A.G.S degrees at FRCC.
3. Most institutions only transfer courses for which they have equivalent offerings.
4. A change of program of study may extend the time required to complete a degree.

Because graduation requirements vary among institutions, students should familiarize themselves with the general education requirements of the institution to which they intend to transfer. For transfer assistance, contact a FRCC advisor or counselor. Transfer agreements for Colorado public higher education institutions may be viewed at <http://higher.ed.colorado.gov/Academics/Transfers/>. Transfer information may also be obtained from four-year college and university representatives who visit FRCC. Students are also encouraged to visit the school to which they plan on transferring.

If you encounter any problems transferring your pathways coursework or an associate's degree covered by one of the statewide articulation agreements to another college or

university, please speak to an advisor at Front Range Community College and at the school into which you will transfer. If you are unable to resolve the issue, you may file a student complaint with the Colorado Department of Higher Education to resolve the problem.

Chronology: FRCC's Campuses

Fall 1968 — FRCC opens its doors in temporary quarters at East 62nd Avenue and Downing Street, Denver. Original name: Community College of Denver, North Campus (CCD-N). FRCC was the first community college created by the State Board for Community Colleges and Occupational Education.

Fall 1977 — CCD-N moves to its permanent home—the Westminster Campus, a new solar-heated facility on 112th Avenue.

July 1983 — Still part of the Community College of Denver system, the North Campus changes its name to Front Range Community College.

July 1985 — Front Range Community College becomes an autonomous community college.

July 1988 — The Larimer County Voc-Tec Center (LCVTC) merges with Front Range Community College to become FRCC's Larimer Campus. LCVTC had offered secondary instruction for the Poudre R-1, Thompson R2-J, and Park R-3 school districts since it opened in 1972, and had offered postsecondary and adult vocational-educational programs since fall 1973.

Fall 1990 — FRCC opens the Boulder Valmont Campus in an office building at 2995 Wilderness Place. The college had been offering classes in Boulder since 1983.

January 1995 — The FRCC Longmont Campus opens, fulfilling a long-standing dream of Longmont residents and the Longmont business community. From 1982 to 1994, FRCC had offered college classes to Longmont residents at Longmont High School and various other locations.

July 1995 — FRCC begins offering classes in the old Fort Collins High School building on Remington Street, which became known as the Remington Campus.

July 1995 — Boulder Arapahoe Campus is formed from a temporary merger of FRCC and the Boulder Technical Education Center (TEC), a subsidiary unit of the Boulder Valley School District (BVSD). The campus reverted to the school district in July 1997 and is no longer part of FRCC.

September 1996 — Having outgrown its Wilderness Place location, FRCC's Boulder Valmont Campus moves to a stand-alone site in Boulder's Gunbarrel area and is renamed the North Boulder Campus.

February 1997 — The Higher Education and Advanced Technology Center (HEAT) opens at the former Lowry Air Force Base in Aurora. FRCC is one of the charter institutions at the new campus. The campus transferred to Community College of Aurora in September 2001.

August 1998 — In response to growing enrollment, the college renovates and expands campuses. The Longmont Campus doubles in size. A new Campus Center and joint-use College Hill Library are added at the Westminster Campus, and a renovated portion of Mount Antero Building and the new Challenger Point,

Longs Peak Student Center, and joint-use Harmony Library are added at the Larimer Campus.

January 1999 — The Brighton Center opens in the former Adams County Justice Center, now the Community Education Center. FRCC joins the CCCOnline consortium for online delivery of courses and degrees.

August 2003 — The Boulder County Campuses in the Gunbarrel area of Boulder and north Longmont reach capacity. FRCC combines the two sites into one larger Boulder County Campus located just southeast of the intersection of Hover Road and the Diagonal (Hwy. 119) in southwest Longmont.

December 2008 — The Brighton Center moves to a new home in the newly remodeled Brighton Learning and Resource Center, in the former Platte Valley Medical Center building.

August 2010 — Larimer Campus opens new science building, Sunlight Peak.

November 2011 — Boulder County Campus completes a renovation which includes new science and medical office technology labs, improvements to 16 general classrooms and the creation of two new classrooms, expansion of the Geographic Information Systems lab, and reconfigured office space that allows more academic advisors, financial aid counselors, and new faculty to meet with students.

January 2012 — Westminster Campus opens a Student Services Center in the heart of the campus. A Welcome Center greets students, who can then access Advising, Testing, Special Services, Financial Aid, Cashiers, Admissions and Records, and a 50-station Computer Commons.

March 2013 — Westminster Campus students approve a bond fee for parking lot safety improvements, including a new stop light and pedestrian walkways and additional close-in parking, and improvements to the Student Center, including a coffee bar, upgraded gym facilities, quiet study space, and a multipurpose performance space. Larimer Campus students approve a bond fee to contribute to funding \$24 million in projects, including a new Integrated Technology Building and renovations to other buildings.

Campuses

www.frontrange.edu

Boulder County Campus

2190 Miller Drive

Longmont, Colorado 80501

303-678-FRCC

Larimer Campus

4616 South Shields Street

Fort Collins, Colorado 80526

970-226-2500

Westminster Campus

3645 West 112th Avenue

Westminster, Colorado 80031

303-404-5000

Brighton Center

At Brighton Learning & Resource Campus

1850 Egbert St., Suite 100

Brighton, Colorado 80601

303-404-5099

College of Communities

Front Range Community College's service area is vast, stretching from North Denver to the Wyoming border, and including all or portions of Adams, Boulder, Broomfield, Denver, Larimer, Jefferson, and Weld counties. With three campuses and one center serving more than 28,000 students, FRCC is the largest community college in Colorado.

FRCC offers programs and courses at its local campuses based on the needs of the students and communities served by those sites. Though many offerings are available at multiple sites, each campus provides a unique instructional mix and learning environment for its students. Student services are open to all students. Hours may vary and a few specialized services may require a visit to one of the larger campuses.

Boulder County: Located near the intersection of Hover Road and the Diagonal (Hwy. 119) in southwest Longmont, this campus serves students throughout Boulder County. With a sensational view of the Colorado Rockies to entice students, this campus specializes in general education and technology offerings, reaching out to students of other colleges and universities who need State Guaranteed General Education courses, and to students seeking to transfer to the University of Colorado and other four-year schools. Boulder County Campus offers a wide variety of programs, including Health Professions, Medical Office Technology, Nursing, Geographic Information Systems, and Multimedia Graphic Design, as well as English as a Second Language and GED instruction. Students of the Boulder Campus participate in many Student Life activities, and the campus is also home to an active student government.

Larimer: Located at Shields Street and Harmony Road in the rapidly growing south side of Fort Collins, this former vocational-technical school offers a complete range of general education classes as well as many technical offerings. With close ties to Colorado State University, the campus offers unique opportunities in the areas of forestry, veterinary technology, electro-mechanical and energy technology, and horticulture. A science and classroom building, a student center with a cafeteria, and a joint-use library built in partnership with the City of Fort Collins (now a partnership with the Poudre River Public Library District) opened in 1998 with an additional science building added in 2010. An active student government serves the student body, and Student Life offerings include many clubs, publications, and other activities. Guaranteed-transfer classes and English as a Second Language and GED instruction are also offered at Larimer Campus Prospect site. Some career/technical programs are offered in Loveland.

Westminster: Located at the crossroads of Adams, Boulder, Broomfield, and Jefferson counties on the north side of the Denver Metro area, the Westminster Campus offers students a wide range of technical degrees and certificates, transfer degrees, and general education courses, including a highly successful nursing program, regionally acclaimed sign language interpreter training program, and the only two-year horticulture program in the Denver metro area. English as a Second

Language and GED instruction are also offered. The expansive, three-level campus offers full physical education opportunities with a gym and workout facility and boasts a full range of student activities, including student clubs, a school newspaper, and an active student government. The campus has a student center and the College Hill Library, jointly shared with the city of Westminster.

Brighton: Located at 1850 Egbert St., Brighton Center offers college preparatory, transfer, and technical courses in a newly renovated building. Student activities, support services, and personal attention provide students with the tools to succeed.

Commitment to Diversity

Diversity among faculty, administration and staff is one measure of quality within academic institutions; we seek to create greater diversity so that we reflect our community and our world.

FRCC strives to develop and foster human diversity in all of our activities, including:

- Student recruitment and support
- Staff recruitment and development
- Community relations
- Curriculum
- Institutional policy

FRCC is an equal opportunity educational institution and does not discriminate on the basis of race, color, national or ethnic origin, religion, sex, sexual orientation, disability, or programs, activities, and employment.

The following statistics for the 2014 academic year provide the general makeup of FRCC's student body:

- Median Age: 22
- Minority: 21.4%
- Men: 43%
- Women: 57%

Institutional Accreditation

The Higher Learning Commission accredits Front Range Community College (FRCC).

The Higher Learning Commission

230 South LaSalle Street, Suite 7-500

Chicago, IL 60604-1413

1-800-621-7440

<http://www.ncahlc.org>

FRCC Program Accreditation

- Accounting: Retail Management Certificate endorsed by the Western Association of Food Chains (WAFC)
- Aromatherapy: Certificate in Holistic Health by the National Association of Holistic Aromatherapy (NAHA)
- Automotive Technology: National Automotive Technological Education Foundation, Inc. (NATEF)

- Automotive Youth Education Systems (AYES): Master Accreditation from the National Automotive Technician Education Foundation
- Dental Assisting: Commission on Dental Accreditation of the American Dental Association, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and by the United States Department of Education
- Early Childhood Education: National Association for the Education of Young Children (NAEYC)
- Emergency Medical Services: Colorado Department of Public Health and Environment Emergency Medical Services and Prevention Division
- Forestry, Wildlife and Natural Resources: North American Wildlife Technician Association (NAWTA)
- Health Information Technology: Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
- Heating, Air Conditioning and Refrigeration: Partnership for Air Conditioning, Heating and Refrigeration Accreditation (PAHRA)
- Kitchen and Bath Design: Certificate in Interior Design has earned accreditation from the National Kitchen and Bath Association (NKBA)
- Medical Assisting: The certified Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE). CAAHEP, 1361 Park Street, Clearwater, FL 33756, (727) 210-2350
- Nurse Aide: Colorado State Board of Nursing
- Nursing: Colorado State Board of Nursing and the Accreditation Commission for Education in Nursing, Inc. (ACEN)
- Pharmacy Technician: American Society of Health System Pharmacists (ASHP)
- Phlebotomy: National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 W. Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415
- Practical Nursing: Colorado State Board of Nursing
- Veterinary Technology: American Veterinary Medical Association (Committee on Veterinary Technician Education and Activities)
- Welding: American Welding Society Accredited Test Facility (AWS/ATF), P.O. Box 440367, Miami, FL 33126
- Yoga Teacher: Certificate in Holistic Health is certified by the Yoga Alliance

Eligible programs are approved by the Colorado State Approving Agency for Veterans Education and Training.

The State Board approves vocational programs for Community Colleges and Occupational Education (SBCCOE).

Associate degree programs are approved by the Colorado Department of Higher Education (CDHE).

Advisory Councils

The Front Range Community College Area Advisory Council is a seven-member council appointed by the State Board for Community Colleges and Occupational Education. The council serves as a liaison between the college and the community and provides advice about long-range planning and how the college can best meet the needs of the communities it serves.

Also, each occupational program has an advisory committee whose members represent a particular business, industry, or professional area. Committee members assist in developing curricula and selecting equipment.

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose certain information about Title IV-eligible educational programs that prepare students for gainful employment in a recognized occupation. The information provided is the best available to us and may only represent one year's data. The information may assist current and prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website:

www.frontrange.edu/GainfulEmployment/. The website also contains data on U.S. Department of Labor's Occupational Classification code by program, graduation rate by program, job placement rate by program, tuition and fees by program and median loan debt incurred by program.

Credits

©2015, Front Range Community College.

The Office of Enrollment Services, Registrar and Publications produces this catalog.

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- Special thanks to the many FRCC faculty and staff who contributed to this catalog.

BECOMING A STUDENT

Application and Enrollment Procedures for New Students

Front Range Community College is an open-door institution and accepts applicants 17 years of age and older. Admission to the college does not guarantee enrollment into a particular course or program.

1. Apply for Admission - Submit an Application

Prior to enrolling at the college, students must complete and submit an Application for Admission online at www.frontrange.edu/apply. This form also is available on campus. For returning students, students who are currently attending a local high school and wish to enroll concurrently at the college, students under the age of 17, or students who wish to attend on an international student visa, please review the Special Admission Procedures in the Admissions section of this catalog.

2. Attend a Get Started Session

All new students must attend a Get Started Session where you will learn about assessment requirements, class registration, financial aid, programs, services, and more. Please go to www.frontrange.edu/getstarted for a full list of Get Started sessions.

3. Take the Assessment Test (or get an exemption)

The State of Colorado mandates that incoming students to Colorado's state-supported institutions of higher education complete an assessment of basic skills and enroll in appropriate courses based on the assessment outcomes. At FRCC, students must complete the placement assessment or secure an exemption before registering for courses.

The assessment determines a students' skill levels in English, reading, and mathematics. Components of this process may include the assessment of reading comprehension, word usage and mechanics, essay writing and mathematics. The assessment is computerized, untimed, and requires approximately two hours to complete.

Students are required to meet minimum scores to enroll in specific classes. The assessment scores required for placement in specific courses are available in the campus advising centers and testing centers.

Reasonable accommodations will be provided upon request for persons with documented disabilities. If you require accommodations to participate in assessment, please notify the Office of Disability Services at your local campus.

Pre-Assessment Preparation

A student cannot "fail" an assessment test, but the scores do dictate the level of courses in which the student is allowed to enroll. Pre-assessment activities are available. Contact advising (www.frontrange.edu/advising) or testing centers (www.frontrange.edu/testing) for further information.

To assist students, computer links and study guides regarding the assessment test are available on the FRCC website: www.frontrange.edu/testing. Click on Study Guides.

Assessment Exemptions

Students who meet one of the criteria listed below are exempt from taking the assessment test:

1. Possess an Associate of Arts, Associate of Science Degree or higher from a regionally-accredited college or university.
Note: Associate of Applied Science and Associate of General Studies Degrees do not qualify for this exemption.
2. Completed college-level English composition (to be exempt from English and reading tests) and/or college-level mathematics course (to be exempt from math test) with a grade of "C" or better at a regionally accredited college or university.
3. ACT or SAT scores may exempt you from the assessment. Scores must be from ACT or SAT testing within the past 5 years. Please go to www.frontrange.edu/testing for required scores.
4. Enrollment in only one course for either employment enhancement or personal interest (one-course waiver).
 - a. Students under 20 years of age are not eligible for the one-course waiver. CDHE requires that all students under the age of 20 be assessed or provide the required waiver exemption for reporting to the secondary schools.
 - b. State guaranteed general education transfer (GT) courses are not eligible for the one-course waiver.
 - c. English and mathematics courses are not eligible for the one-course waiver.

Students under 20 years of age must be assessed unless they qualify for an exemption under #1, #2, or #3. To request an exemption, students must bring the appropriate documentation (college transcripts, diploma, or ACT/SAT scores) to the Testing Center or the Advising Center.

Assessment of English as a Second Language Students

Students for whom English is a second language, including international students, may be required to take the ESL portion of the Accuplacer assessment for placement into ESL courses. Students for whom English is a second language enrolling in credit courses must take the Accuplacer or qualify for an exemption before enrolling in classes.

Note: International students attending the college on an F-1 student visa are required to contact their campus International Student Admissions Officer to schedule an orientation.

4. Meet with an Academic Advisor

Advising assists students in planning their educational objectives and provides an opportunity for students to meet faculty and staff outside the classroom. Advising is an ongoing process, and students should consult with an advisor regularly.

In order to promote student success, the college requires all new students to meet with an advisor before registering for classes. Continuing students are strongly encouraged to meet with an advisor each semester before registering and at other times throughout the year as needed.

An advisor will help you interpret your assessment results, create an educational plan, review program requirements, and release the New Student hold on your account. Academic advising options for new and continuing students vary by campus and include appointments and drop-in advising. Contact the appropriate campus to schedule an appointment, or stop by to receive more information about advising. For hours and contact information, visit www.frontrange.edu/advising.

5. Register for Classes

Students may register for courses, drop courses, withdraw from courses, make payment, and obtain grades through eWOLF on the FRCC website at www.frontrange.edu. Additionally, students may change their address or password, print unofficial transcripts, request an official transcript, pay tuition and fees, and check their financial aid.

Before registering for courses, meet with your advisor or consult your educational plan. DegreeCheck is a great resource to keep you on track. Find DegreeCheck in eWOLF under the Student tab.

6. Complete the Payment Process - Pay Tuition

Full payment, your first payment through the deferred payment plan, or acceptance of financial aid is due by close of business on the payment deadline. If the payment deadline has passed, payment is due by the end of the business day following the day you registered for classes. Pay tuition and fees in eWOLF under the Student Finance tab or on campus at the Cashier's office. Accept your financial aid award in eWOLF under the Student Finance tab.

- **Purchase Books and Supplies** - Print your schedule and bring it to the FRCC Bookstore, or order your books online at www.frontrange.edu/bookstores.
- **Attend New Student Orientation** - New Student Orientation (NSO) is a great way to become familiar with FRCC, make friends, and begin a successful college experience. Register for New Student Orientation (NSO) online at www.frontrange.edu/orientation.
- **Get your Wolf Card (Student ID Card)** - Get your official FRCC student ID card. The Wolf Card gives you access to the library, computer labs, fitness center, and other services on campus. It also gives you discounts around town. Bring a government-issued photo ID, a copy of your current class schedule, and \$5 to the Student Life office of the Boulder County and Westminster campuses, or the Longs Peak Student Center Information Desk on the Larimer campus.
- **Log into eWOLF (Student Account) and Activate Your College-issued Email** - When accessing your eWOLF account for the first time, you will be asked to enter a password: the initial password is your birth date (mm/dd/yy). Next, you will be asked to provide a security question and then a new custom password. It is important that you securely retain your password so that you can use your eWOLF account to access grades, transcripts, online registration, financial aid, etc. All important communications including waitlist status and notifications from the college are sent to your college-issued email. In eWOLF click on Student Email in the upper right-hand corner to activate your email. Visit www.frontrange.edu/activateemail for step-by-step instructions.

ADMISSION

Front Range Community College is an open-door institution and accepts applicants 17 years of age and older. Admission to the college does not guarantee enrollment into a particular course or program.

Application for Admission

Prior to enrolling at the college, students must complete and submit an Application for Admission online at www.frontrange.edu/apply. This form also is available on campus. For returning students, students who are currently attending a local high school and wish to enroll concurrently at the college, students under the age of 17, or students who wish to attend on an international student visa, please review the Special Admission Procedures in the Admissions section of this catalog.

Special Admission Procedures

Readmission (Former Students)

Former students who return after an absence of 12 months or more must reapply for admission. Degree and certificate requirements in effect at the time of readmission apply to readmitted students.

High School Students Seeking Concurrent Enrollment Options

High school students attending FRCC may earn both college and high school credit for their course(s). Students approved by their school district may have tuition costs paid for approved classes. A written agreement must be completed, approved by the school district, and submitted to FRCC. Interested students can obtain more information from their high school or speak with College Now staff at Front Range Community College.

Underage Admission

Pursuant to CRS 23-60-103 (3), FRCC admits students who are 17 years of age or older. Students wishing to secure a waiver of the minimum age for admission to the college must meet the criteria as outlined in State Board Policy BP 4-10.

Qualified students must demonstrate readiness for the course by meeting all established cut scores, recommended preparation, and prerequisites for the course.

Students are required to discuss special considerations, including expectations of college enrollment and appropriateness of course selection with an advisor or designee, complete the underage admission waiver.

The underage application waiver must be signed by the student and parent, or legal guardian indicating that the student and parent/guardian have been advised regarding the expectations of the college.

Students age 15 and younger taking FRCC classes taught at the high school may need approval by the Dean of Student Services or designee prior to enrolling. Students age 15 and younger are not allowed to enroll in FRCC classes taught at the College in any mode of delivery unless they receive prior approval from the Dean of Student Services.

International Students

According to federal law, the college may enroll non-immigrant alien students, or international students with an F-1 Visa. Please refer to International Student Admissions at www.frontrange.edu/international.

International students must complete the following procedures to be admitted to the college:

1. Submit a completed Application for Admission, Supplemental Information Form, and Affidavit of Financial Support document.
2. Submit one English translated copy of:
 - a. High school transcript indicating completion or graduation date
 - b. College transcript from any other college or university attended
3. Submit certified documentation of English proficiency as indicated by:
 - a. Test of English as a Foreign Language (TOEFL) score of 153 on the computer based exam (FRCC code is 4119), or internet-Based Test (iBT) score of 53, or
 - b. International English Language Testing System (IELTS) score of 6.0 or higher, or
 - c. Other approved exceptions (i.e. English as a Second Language programs)
4. Submit the Affidavit of Financial Support document and a statement of the student's or the sponsor's financial resources in United States currency. The statement must show minimum funds of US \$25,000 deposited in a financial institution to cover expenses for each academic year, and be notarized by an official of the financial institution. Arrangement for payment of tuition and fees must be made with the campus cashier by the payment deadline. Students sponsored by foreign governments must submit a valid authorization. While the college bills approved third parties for tuition and fees, international students are ultimately responsible for payment of all tuition and fees.

To be considered for admission, international students must submit all materials to the Office of Admissions and Records by these deadlines:

Out of Country

- Summer Semester – April 15
- Fall Semester – June 15
- Spring Semester – November 15

In Country

- Summer Semester – May 1
- Fall Semester – August 1
- Spring Semester – December 15

After materials are reviewed and approved, the college issues the United States Immigration Form I-20. Tuition and fees for nonimmigrant alien students are approximately \$10,000 for full-time enrollment per academic year. Students need

approximately \$10,000 for books, supplies, medical insurance, and living expenses during the academic year. FRCC does not have residence halls; therefore, students are responsible for finding their own housing.

After being admitted, international students must complete the following items:

1. Present proof of current and adequate medical insurance by the first day of classes to the International Student Admissions Officers, or the student will be automatically enrolled and billed for medical insurance. The college has provisions to insure international students under a comprehensive plan. Information may be obtained from the International Student Admissions Officers.
2. Complete assessment testing for placement into courses. This assessment may be taken online in the student's home country. Contact the Testing Center for more information.
3. International students must meet with an advisor for academic advising, attend required orientation, and complete payment of tuition and fees with the cashier.

Special Program Admission

Some programs, such as nursing and allied health programs, have limited space and have special admissions procedures. Please review program requirements in this catalog, or contact the faculty advisor in those areas.

Physical Examination and Immunization

Physical examinations and specific immunizations are not required for admission to the college. However, a selected instructional program, such as Health Professions, may require specific immunizations.

Denial of Admission

The College may deny admission to any individual whose personal history and background indicates that his or her presence at the college would endanger the health, safety, welfare, or property of the college community, or interfere with the orderly and effective performance of the college's functions. FRCC has the right to deny admission or continued enrollment to any individual who has misrepresented his or her credentials or background.

Persons who seek enrollment pursuant to CRS 16-11-212 (Work and Education Release Programs) will be given timely notification of an acceptance or denial of admission as required by the statute.

Review of a denial of admission or denial of continued enrollment or re-enrollment of students shall be in accordance with the college's disciplinary procedures.

Privacy

In completing application and financial aid processes, students must act on their own behalf. Others may not access student academic or financial information without the student's prior written approval. (See Family Education Rights and Privacy)

Student Identification Number

A state law initiated in 2003 requires that each Colorado postsecondary institution assign to each student a unique ID number that shall not be a student's Social Security Number. This number is your Student ID (SID). A Social Security Number is

required for Financial Aid and College Opportunity Fund (COF) stipend recipients.

High School and Former College Transcripts

FRCC does not require transcripts from previous high schools or colleges for admission. However, if a student plans to complete a degree or certificate with applicable transfer credit, an official transcript must be sent directly to the college. As part of this process, students must complete a Transfer Credit Evaluation Request Form, available from the Office of Admissions and Records or on our website at: www.frontrange.edu/transcripts/. FRCC may deny admission or continued enrollment to persons who misrepresent their credentials or background. (See Denial of Admission.)

FRCC reserves the right to require transcripts from other institutions when appropriate.

Student Classification

Students are classified by academic year and admission status according to the following definitions:

Academic Year

- **Freshman:** Successful completion of fewer than 30 college-level semester credit hours.
- **Sophomore:** Successful completion of 30 or more college-level semester credit hours.
- **Unclassified:** Awarded a degree at the associate level or above.

Admission Status

- **New Student:** Attending FRCC for the first time.
- **Continuing Student:** Attended FRCC within the past 12 months.
- **Readmitted Student:** Not attended FRCC within the past 12 months and re-entering the college.
- **Transfer Student:** Some prior college or university experience.

Residency

Students are classified as either a resident or non-resident of Colorado for tuition purposes at the time of admission. Colorado Tuition Classification is governed by State Law (Title 23, Article 7, of the Colorado Revised Statutes of 1973, as amended) and by judicial decisions that apply to all public institutions of higher education in Colorado and is subject to change at any time. Residency decisions do not transfer between Colorado colleges. Front Range Community College must apply the rules set forth in the residency statutes and is not free to make exceptions to the rules except as specifically permitted by law.

General Qualifications

- Resident status requires domicile in Colorado for one year immediately prior to the first day of class. Domicile is defined as a true, fixed, and permanent home and place of habitation. Domicile is a legal characteristic that everyone has, and students can have only one domicile at any one time. A student's domicile is a legal, primary residence.
- During the one-year domicile period, the student should comply with all legal obligations of a Colorado resident such

as demonstrating proof of voter registration, Colorado income tax payment, Colorado motor vehicle registration, Colorado issued driver's license or ID card, and/or proof of employment.

- Students under the age of 23 (unemancipated minors) may be eligible for in-state tuition if a parent or court-appointed legal guardian has been domiciled and complied with legal obligations in Colorado for one year.
- Students whose parents are not domiciled in Colorado *may also qualify to begin the one-year domiciliary period* if the student is: at least 23 years old, married, or emancipated. Emancipation requires documentation of financial independence and the ability to maintain your own residence and associated expenses in addition to tuition. If you receive financial support from your parents, extended family, friends, or other similar sources, including trusts and loans, you are not considered emancipated.
- There are several amendments to the Tuition Classification Law for certain populations of students including Olympic athletes, military personnel, inmates, recent Colorado high school graduates, GED recipients, etc. Please contact the Tuition Classification Officer at Front Range Community College to determine if you may be in an eligible population.
- FRCC sets a priority deadline for each semester that is typically one week before the start of the fifteen-week semester. Students who meet this priority deadline should know the petition decision before the deadline to drop courses for the fifteen-week semester. However, all students have up to 30 days after the first day of his/her term of admission or enrollment to petition for in-state tuition. The Tuition Classification Officer may request additional documentation as the burden of proof rests upon the petitioner to substantiate the claim of resident for tuition classification purposes. The Tuition Classification Officer notifies the student of the outcome within 30 days of the decision via email and/or standard letter.

Initial Classification

The initial tuition classification decision is made by the designated Tuition Classification Officer in the Admissions and Records Office for the semester in which the student is admitted. The classification is based on the information provided on the application for admission. Failure to answer all questions could lead to a non-resident classification. After the tuition classification is determined, it remains unchanged in the absence of further action and evidence to the contrary.

Changes in Tuition Classification

Any student who believes that the tuition classification decision is not correct or whose information has changed and now wishes to prove eligibility for in-state tuition may petition for in-state tuition or resident classification. Petition forms are available online at www.frontrange.edu/residency or at the Admissions and Records Office.

Correction of Residency Determination Due to an Error

FRCC reserves the right to correct a residency determination after the 30-day deadline in cases where the college believes an error was made.

Appeal Procedures for Residency and Tuition Classification

Any student who is denied in-state tuition classification after petitioning for in-state tuition may appeal the decision of the Tuition Classification Officer. The student must appeal to the Coordinator of Admissions and Records in writing and provide any additional supporting documentation available to substantiate the claim to in-state tuition classification within 30 days of the denial.

Non-Resident Students and the Western Undergraduate Exchange (WUE) Program

WUE is the Western Undergraduate Exchange, a program coordinated by the Western Interstate Commission for Higher Education (WICHE). Through WUE, students in some western states may enroll in many two-year and four-year public college programs at a reduced tuition rate, which at FRCC is 150% of the total cost of resident tuition. WUE students are not eligible for the College Opportunity Fund stipend, but WUE tuition is considerably less than non-resident tuition. For more information, go to <http://wiche.edu/wue>.

REGISTRATION

Before registering for courses, meet with your advisor or consult your educational plan. DegreeCheck is a great resource to keep you on track. Find DegreeCheck in eWOLF under the Student tab. Registration instructions are published online each semester at www.frontrange.edu/Prospective-Students/Getting-Started/how-to-register-step-by-step.aspx, and help can be found in eWOLF. In addition, in-person registration assistance can be obtained on campus at Admissions and Records, Advising, the Student Success Center or Welcome Desk.

Course Prerequisite and Co-requisite Requirements

A prerequisite is a requirement that must be met before you can enroll in certain courses. For example, at FRCC, before you can take ENG 122: English Composition II, you must meet one of these requirements:

- ENG 121: English Composition I, completed with a C or better
- ACT English score of 26 or higher
- SAT Verbal score of 600 or higher
- AP English and Language Composition score of 3 or higher

A co-requisite is a course that, in most cases, must be taken at the same time or in the same semester as another course. Some co-requisites can be taken prior to the class. For example, MAT 121: College Algebra is a co-requisite for CHE 111: College Chemistry I, unless it has already been successfully completed.

A student enrolled in a developmental education course that is a prerequisite or co-requisite to a college-level course, must earn a S/A, S/B, or S/C to have successfully completed that prerequisite or co-requisite requirement. An U/D or U/F are considered failing and will not fulfill the prerequisite or co-requisite and that course is not financial aid eligible.

All prerequisites and co-requisites are included in the course descriptions as listed in this catalog. In lieu of taking the prerequisite course, you can meet prerequisite requirements with appropriate scores on one of the following tests if taken within the last five years:

- ACT or SAT scores
- AP test scores
- CLEP scores
- DSST scores
- Other placement test scores
- Prior college level credit earned from a regionally accredited university or college completed with a grade of C- or above. This credit can, in most cases, be more than 5 years old. Science courses using pre-requisites must have been completed within the last 7 years.

To have test scores or prior college credit evaluated for prerequisite exemption, submit in person or email from your student.ccs.edu account an unofficial copy of your transcripts to your campus advising or testing department. When submitting information by email, please include your name, S#, and course(s) for which you are registering.

If you are currently taking a course at a different institution and need to register for the higher level course at FRCC, bring proof of your enrollment in the course to the campus advising or testing center. You will also need to submit proof of a final passing grade no later than the payment deadline for the term or you will be dropped from the higher level course at FRCC.

In certain subject areas, a prerequisite override may be an option. Please see the campus academic department if you feel this applies.

If you intend to earn a certificate or degree from FRCC and have had previous college-level learning experiences (through testing, other college coursework, or job training), find out how to transfer credit into FRCC in the Academic Matters section of this catalog.

Credit Hours

In general, students attend 50 minutes of lecture or class each week, for 15 weeks, for each credit hour earned. Class time requirements differ for certain lab, lecture/lab, and hybrid courses. Typically, students spend a minimum of two hours on class assignments for every one hour of class.

Course Load

The typical course load for full-time students is 12-18 credit hours.

12 + credits = full-time

9-11 credits = 3/4 time

1-8 credits = 1/2 time

Students must receive course overload approval from an academic advisor, Dean, and/or their designee to enroll in more than 18 credits in any semester.

Students receiving financial aid or VA educational benefits should contact their Financial Aid or Veteran Services Advisor for more information on the impact of course load on the amount of financial aid or VA educational benefits.

Adding and Dropping Courses

To add or drop courses, go to www.frontrange.edu and log into eWOLF. Students can add classes to their course schedule until the published deadline for that course. Students can drop courses from their course schedule and receive a refund up to the published drop deadline for that course. Dropping a course deletes the course from the student's record. Failure to officially drop a course by the applicable deadline will result in a financial obligation for the course tuition and fees and may result in the assignment of a failing grade and financial obligations. Add and drop deadlines are published each semester at www.frontrange.edu/Academics/Drop-Add-Withdraw-Deadlines/. It is the student's responsibility to add or drop courses by the published deadline.

Course Waitlist

When a course is full, a waitlist is created to facilitate registration for open spaces that may occur. The waitlist allows students an opportunity to get into a course that is currently full but may have openings prior to the start of the course. The

waitlist will record the time and date that the student placed his/her name on the waitlist and students will be notified of an opening to enroll via their college-issued email account.

Most courses have a waitlist option when the course is full. However, waitlists are not available for programs with special admission requirements (e.g., nursing). A student cannot waitlist for more than one section of the same course. For example, a student cannot waitlist for ENG 121-001 and ENG 121-601. In addition, students cannot register for a course and waitlist for a different section of the same course.

A student's schedule cannot exceed 18 credit hours, including both the waitlisted and enrolled courses combined, unless the student has received approval for course overload from an academic advisor or Dean for that semester.

Instructions on how to waitlist for a course can be found at www.frontrange.edu/waitlist/.

Withdrawing from Courses

Students can withdraw from courses after the drop deadline has passed and before 80% of the course has been completed. A course withdrawal does not delete the course from the academic record, and does not provide the student a refund of tuition, fees, or COF stipend. A grade of "W" is recorded on the transcript. This does not impact a student's GPA, but may impact a student's academic progress as it pertains to degree or certificate completion rate and awarding of financial aid. A withdraw will also affect a student's enrollment status, as it will not count toward the total number of credits enrolled in a semester. Non-attendance does not activate the withdrawal process and may result in a failing grade and/or financial obligation.

Deadlines for withdrawing vary from course to course and are published each semester in your course syllabus and at www.frontrange.edu/Academics/Drop-Add-Withdraw-Deadlines/. Students are strongly encouraged to meet with their academic advisor and a financial aid advisor prior to withdrawing from a course or courses. Veteran students, students enrolled through Concurrent Enrollment, and International students must meet with their advisor prior to withdrawing. To withdraw from courses, go to www.frontrange.edu and log into eWOLF or complete the process in person on campus in the office of Admissions and Records.

Withdrawal Appeal for Extenuating Circumstances:

An appeal process is available to students who experience an extenuating circumstance beyond their control that affects their ability to participate in coursework for prolonged periods of time or impacts their ability to drop and/or withdraw from a course by the published deadline. Students must complete an appeal application packet, including supporting documentation, for their appeal to be considered by the committee.

- Students must submit a completed *Extenuating Circumstances Appeal* form with supporting documentation within 12 months of the semester for which they are appealing. The form can be found in eWOLF under the Student tab.
- Students must document the extenuating circumstance. Please note that a change in employment or work hours does not constitute an extenuating circumstance.

Extenuating circumstances can include but are not limited to extended and unexpected illness, accidents, natural disasters, unexpected requirements for military personnel and emergency management officials during an academic term. Documentation of the extenuating circumstance must be received within 30 days of submitting the appeal. Appeals without supporting documentation will be denied.

- Repeated appeals for the same reason will not be considered.
- Completed *Extenuating Circumstances Appeal* form will be reviewed by a committee and the student will be notified by their college-issued email of the committee's decision within 30 calendar days of receipt of the appeal.
- If an appeal is denied, a student may request to have the appeal reconsidered by a second-level committee, only if the student can supply additional documentation to support the extenuating circumstance. When a second review is requested, the decision made by the committee is final.
- If approved, the Extenuating Circumstances Appeals Committee may award an administrative withdrawal and/or tuition credit. A grade of "AW" is recorded on the transcript. This does not impact a student's GPA, but may impact a student's academic progress as it pertains to degree or certificate completion rate and awarding of financial aid. A withdraw will also affect a student's enrollment status, as it will not count toward the total number of credits enrolled in a semester. Tuition credit is to be used for future terms and cannot be granted in the form of a refund or debt forgiveness. Credit balances will be used to repay federal financial aid first.

FINANCIAL MATTERS

This section of the catalog explains the financial information students need to know to make informed decisions about attending college.

The latest tuition and fee rates are available online at Front Range Community College's website, <http://www.frontrange.edu/tuition>.

Tuition and Fees

The total cost of your education at Front Range Community College (FRCC) is broken into tuition and fees. The State Board for Community Colleges and Occupational Education determines tuition and some fees, which are subject to change. Fees vary by campus. The state of Colorado pays a portion of the cost of higher education attending Colorado public institutions. This reduces your out-of-pocket tuition and is called the College Opportunity Fund (COF) stipend.

Tuition rates per credit hour for the academic year 2014-2015. Rates are subject to change. Fees also apply. See fee explanations below.

	Tuition per credit hour	College Opportunity Fund (COF) Stipend	Total Tuition per credit hour
On campus classes	\$199.9	- \$75.00	\$124.90
Online classes	\$295.75	- \$75.00	\$220.75
Nursing classes	\$257.85	- \$75.00	\$182.85

College Opportunity Fund (COF) Stipend

The College Opportunity Fund (COF) provides a tuition stipend to resident students. The amount of the per-credit-hour tuition stipend is set annually by the General Assembly and pays a portion of students' total resident tuition. Students must sign up once to create a lifetime account and then authorize the state to pay the student's portion each semester in the form of a COF stipend. Students can authorize the COF stipend each semester when registering for classes. Students who fail to sign up for the COF lifetime account or fail to authorize the COF stipend are responsible for paying the entire tuition amount. The Department of Higher Education will accept billing appeals from students who believe there was a mistake made with their College Opportunity Fund (COF) stipend billing after the student has tried to resolve the issue with FRCC. To file a COF appeal with the Department of Higher Education, go to http://higher.ed.gov/Finance/COF/COFAppealApp_061013.pdf.

The College Opportunity Fund allows all resident students to apply the COF stipend to up to 145 credit hours of an undergraduate degree. If a student applies the COF stipend to 145 credit hours and has additional credit hours to complete a degree, the student may apply for a one-time waiver to receive additional credits of COF. Students seeking this waiver must meet with an academic advisor to complete the waiver

requirements. Requirements include an academic plan, personal statement and institutional COF Waiver form. The Chief Academic Officer will make a determination and communicate the decision to the student within 30 days.

Fees

A variety of fees are charged at our campuses. The following fee descriptions explain the different types of fees and their purposes.

Registration Fee

A flat registration fee is charged each semester, regardless of the number of courses taken. This fee is refundable if all courses for the semester are dropped by their respective drop deadlines.

Course Fees

To cover the cost of consumable materials and supplies, some courses are assessed course fees. Certain courses and/or programs require services performed by outside parties. One example is malpractice insurance. A list of these fees can be found at <http://www.frontrange.edu/paying-for-college/tuition-and-fees>.

Student Center-Campus Center Bond Fee

In 2013, students at the Larimer and Westminster campuses voted to approve new bonds or repurpose existing bonds for campus construction and renovation projects. The current fee amounts can be found on our website <http://frontrange.edu/Prospective-Students/Tuition-and-Fees/>.

Student, Parking and Facility Fees

Student fees are charged at a per credit hour rate and support the operation of Student Life services and the maintenance of parking lots on each FRCC campus. These fees are subject to change. Student Life services include many of the programs and activities that supplement learning experiences at the college, including but not limited to campus events, student activities, students clubs, student organizations, student publications such as the *Boulder County Sun*, *The Front Page*, *The Rangeview* and the official Student Handbook. The current fee amounts can be found at our website, <http://www.frontrange.edu/Prospective-Students/Tuition-and-Fees/>.

Fee Disputes

Student fee proposals or any issues relating to student fees may be disputed by filing a formal written complaint (see *Student Complaint/Grievance*) with the Dean of Student Services. A formal, written complaint is one regarding some alleged type of adverse action against a student from a decision made by the institution or alleged violation of student rights. Fee assessments/increases approved at a student election are not subject to the dispute process.

Tuition and Fee Payment

The cashier's office at each campus collects all payments for tuition and fees, and disburses student refunds. Each semester, the college sets a date by which payment must be received for course enrollments. This date is known as the **payment deadline**

and can be found at <http://www.frontrange.edu/paying-for-college/tuition-and-fees/current-tuition-rates>. Regardless of the payment method (financial aid-grants, scholarships or loans; Deferred Payment plan; third party payment; or payment in full by student, parent, or other), it is the student's responsibility to ensure that payment to cover all tuition and fees is made prior to the published deadline. For enrollments that take place after the published payment deadline, payment is due by the close of the next business day. If payment is not received by the published deadline, the student risks being dropped from all courses for non-payment (or underpayment), and may only re-enroll if space is available in desired courses. Please note that changes to the student's schedule can result in an outstanding balance. Payment plans are available for full or partial balances, see Deferred Payment below. Even though FRCC intends to drop students who do not pay by the payment deadline (or in cases where the deadline has passed, by close of the next business day), the college cannot guarantee that classes will be dropped for unpaid accounts. Students are responsible for dropping classes they do not intend to attend even if they do not pay on time. Payment options include:

- Mail the payment (check or official employer/agency authorization only) to the Cashier's Office. Payment must be received by the deadline.
- In person at the Larimer, Boulder County and Westminster Cashier's Offices by cash, check, money order, Visa, MasterCard, Discover or official employer/agency authorization. Please note: **cash payments are not accepted at Brighton Center.**
- Online by accessing your student account through eWolf with Visa, MasterCard, Discover, or American Express.
- Sign up for a Deferred Payment Plan in eWolf.
- Financial Aid awards must be accepted. Any amount not covered by Financial Aid will be the student's responsibility and is due by payment deadline or based on the deferred payment plan set with the College.

Deferred Payment

Students may elect to pay tuition and fees over the course of one semester by signing up for a deferred payment plan with Nelnet Business Solutions. All deferred payment arrangements are created online in eWOLF. For more information go to <http://www.frontrange.edu/paying-for-college/tuition-and-fees/payment-options>.

You need to know:

- By signing up for a deferred payment, a non-refundable service fee will be charged.
- If you withdraw from courses after the drop/refund period, you are still responsible for completing your payments.
- You will not be dropped from your current semester's classes if you fail to make payments on your deferred payment plan. However, a financial hold will be placed on your account, and you will be dropped from courses in future terms for which you have already enrolled. FRCC and a collection service will pursue unpaid balances and you will be held responsible for any collection charges.

- If you have a financial hold on your account, you are not eligible to register.

Financial Obligations of Students

Financial obligations are due and payable to the college when incurred and are payable by the established payment deadlines. An authorized third party may be billed for tuition and fees; however, ultimate responsibility for payment remains with the student.

Students who are financially obligated to FRCC—whether through an outstanding account balance, returned financial aid, a third party promise to pay, outstanding deferred payment, or failure to account for college property in their possession—are not issued an official transcript or allowed to register for additional courses until payment is made. In accordance with state policy, all delinquent student financial obligations, including those from improper withdrawal/drop procedures and the loss of previously awarded financial aid, are referred to the state's central collection service.

Bad Checks

Returned checks constitute nonpayment. If a check is returned prior to the official drop date due to insufficient funds or stop payment, the student is dropped from all classes and charged a \$17 bad check fee. A hold will be placed on the student's transcript and future registration. If a check is returned after the official drop date, the student will not be dropped from classes and will be responsible for all outstanding tuition, fees, bad check fees, and resulting collection charges. A hold will be placed on the student's transcript and future registration.

Credit Card Charge Backs

A Credit Card charge back constitutes non-payment. If your credit card charge is reversed before the drop date, you may be dropped from all of your classes and will be charged a \$15.00 fee. A hold will be placed on your transcript and future registration. If your credit card charge is returned after the drop date, you will not be dropped from your classes. You will be responsible for all outstanding tuition, fees, delinquent accounts, credit card charge back fees, and resulting collection charges. A hold will be placed on your transcript and future registration.

Tuition and Fee Refunds

Students may receive a refund of tuition and fees for any course dropped by the drop deadline or for any courses the college cancels. The deferred payment fee is non-refundable. No refunds are given after the drop deadline. Students receiving financial aid may have their aid adjusted and should check with the Financial Aid Office prior to dropping a course. Student receiving Veteran Administration Educational Benefits should talk to their Veteran Services Advisor prior to dropping a course.

All refunds will be issued electronically based on the selected HigherOne refund preference chosen by the student. All students age 17 years and older will be mailed a HigherOne refund card upon their first enrollment in the college. The student can choose to activate the HigherOne refund card by selecting a refund preference. Students may select to have their refunds credited to a HigherOne account, to their existing bank account via ACH transfer, or may request a paper check to be mailed. If a preference is not selected, the refund will be issued as a paper check. Refunds will be issued by the college

within 14 days of appearing on the student's account, beginning after the first day of classes for any given term. For financial aid students, refunds begin after the last day to drop for the full semester. For more information, go to <http://www.frontrange.edu/paying-for-college/refunds>.

Financial Aid

The Financial Aid Office advises students and/or families and administers funds that are designed to assist students in meeting their educational expenses. Front Range Community College (FRCC) participates in grant, work study, loan, and scholarship programs. Funding sources for these programs include federal, state, institutional, and private sources. Information regarding financial aid programs may be obtained online from the Financial Aid website or any of the FRCC Financial Aid Offices. Every effort will be made to help students in financing their college education, which may involve drawing on a number of aid sources.

Application Procedure

1. Submit an **Application for Admission** to FRCC. Financial aid awards will only be made to students who have been accepted for admission and are in an eligible degree and/or certificate program. Not all degree and/or certificate programs offered by FRCC are eligible for financial aid.
2. Submit a Free Application for Federal Student Aid (FAFSA). The application is available on the U.S. Department of Education's website at www.studentaid.ed.gov.
 - a. There is a priority date of April 1st for completing the FAFSA in order to be eligible for certain available funds.
 - b. A new FAFSA must be submitted each academic year.
3. Financial aid applications will be accepted throughout the year.
4. Submit all requested documentation to the Financial Aid Office as soon as possible to expedite the process. Awards will not be made until supporting documentation is complete. Submission methods vary according to the document request.
5. Outstanding requirements and additional information is available for students via eWOLF, under the Finance tab.
6. Award notifications for the fall term are generally sent beginning the prior spring term and continue throughout the award year.

Financial Aid Eligibility Criteria

To qualify for assistance, students must meet at least the following criteria:

1. Be accepted in an eligible degree and/or certificate program.
2. Be a citizen or permanent resident of the United States.
3. Be registered with Selective Service (if required).
4. Have a high school diploma or passed the General Equivalency Diploma (GED).
5. Not owe a refund on a Federal Grant or be in default on a Federal Educational Loan.

6. Apply in a timely manner and submit all documentation and/or information needed by the Financial Aid Office to make a determination of eligibility.
7. Maintain eligibility requirements under Financial Aid Satisfactory Academic Progress.

Financial Aid Satisfactory Academic Progress Policy

Each institution that receives Title IV funds is required by the U.S. Department of Education to define and enforce standards for Satisfactory Academic Progress.

Satisfactory Academic Progress measures a student's performance in the following three areas/criteria: completion rate, cumulative GPA and maximum time frame. The Financial Aid Office is responsible for ensuring that the "Satisfactory Academic Progress" criteria are met. This is determined by routinely monitoring and making determinations for continued financial aid eligibility. In order to be eligible to receive financial aid (federal and/or state and at times institutional aid), the student must be making satisfactory progress toward an eligible degree and/or certificate, as identified in the quantitative (the completion rate of all attempted credit hours and the maximum timeframe for program completion) and qualitative (the cumulative GPA) standards of the policy.

Academic progress may be reviewed at the time a financial aid application is received and will be reviewed at the end of each term. The maximum time frame allowed in which a student is expected to complete their eligible degree and/or certificate is within 150% of the number of credit hours required for the specific program. All attempted credit hours are considered with the maximum time frame allowed, which includes all transfer credits and courses taken at Front Range Community College as a high school student. The standard of satisfactory academic progress must include a student's total academic history at Front Range Community College regardless of whether the student has previously received financial assistance. If a student does not meet the requirements, they become ineligible for financial aid and have the right to appeal an ineligible status. Appeal information is available in eWOLF under the Student Finance tab. Click here for the Financial Aid Satisfactory Academic Progress Policy or see your financial aid advisor.

Funding Sources

Grants

1. **Federal Pell Grants.** The Federal Pell Grant is a federal aid program designed to provide financial assistance for postsecondary education. Awards are established with documented need and amounts determined by the Federal Government. Students must complete a FAFSA.
2. **Federal Supplemental Educational Opportunity Grants (FSEOG).** A federal grant designed to provide assistance to documented exceptionally needy students to help pay for postsecondary education. Awards must not exceed \$4,000. Students must complete a FAFSA. Funds are limited.
3. **Colorado Student Grants.** The Colorado Student Grant program is funded by the Colorado General Assembly and is designed to provide assistance to qualified undergraduate students with documented financial need at state institutions of higher education. Students must be Colorado residents and complete a FAFSA. Funds are limited.

Work Study

1. **Federal Work Study** - This is a federally funded work program with a portion of the funds contributed by the college. Awards are made only to students who have documented financial need. A wide variety of positions are available on or off-campus. Off-campus jobs are available with non-profit agencies and local elementary schools. Students must complete a FAFSA. Funds are limited.
2. **Colorado Work Study** - This funding is by the Colorado General Assembly for an employment program awarded to Colorado residents with documented financial need. A wide variety of positions are available on or off campus. Students must complete a FAFSA. Funds are limited.
3. **Colorado No-Need Work Study** - This funding is by the Colorado General Assembly for an employment program awarded to a limited number of Colorado residents without documented financial need. Students must complete a FAFSA. Funds are limited.

Loans

1. **Federal Subsidized Stafford Loan.** These are loans based on documented financial need. Repayment begins six months after the student has graduated or is no longer attending at least six credit hours. If applicable, partial or full origination fees may be deducted prior to disbursement of funds. Students must complete a FAFSA.
2. **Federal Unsubsidized Stafford Loan.** These loans are not based on financial need. Repayment begins six months after the student has graduated or is no longer attending at least six credit hours. If applicable, partial or full origination fees may be deducted prior to disbursement of funds. Students must complete a FAFSA.
3. **Federal Parent Loan for Undergraduate Students (PLUS).** These loans are made to parent(s) with good credit histories to help pay educational expenses of dependent, undergraduate students enrolled at least half-time. Amounts are limited to the cost of educational expenses minus other aid. If applicable, partial or full origination fees may be deducted prior to disbursement of funds. Repayment begins 60 days after the final disbursement. Students must complete a FAFSA.

Scholarships

1. **Colorado Merit Scholarship.** This funding is provided by the Colorado General Assembly for Colorado residents.
2. **FRCC Foundation Scholarships**
3. **Outside Scholarships**

Scholarships are available from several sources, and the criteria for awards vary. Each scholarship is awarded under provisions of the particular scholarship program. The majority of scholarships require some type of application. For a complete description of scholarships and appropriate application procedures, visit our website. In addition, FRCC administers scholarship funds that are provided from funds received through corporations, businesses, foundations, individuals, civic organizations, and service clubs. Applications for these scholarships can be obtained through free online scholarships searches, high school counselors, and the grantor of the scholarship.

Summer Aid

Funding for summer generally consists of unused academic year Federal Pell Grants and Federal Stafford Loan (Subsidized and/or Unsubsidized), or PLUS Loan eligibility.

Additional Information

Detailed information about financial aid grants, work study, loans and scholarships, application processes and procedures, rules and regulations governing the various programs, and cost of attending FRCC are available by visiting our website or at the Financial Aid Offices. Contact can also be made by calling one of the telephone numbers listed below or sending an email to askfa@frontrange.edu.

Campus	Phone Number
Boulder County Campus	303-678-3696
Larimer Campus	970-204-8376
Westminster Campus	303-404-5250
Brighton Center (limited services)	303-404-5250

Veteran Administration Educational Benefits

A veteran or dependent of a veteran receiving VA educational benefits, or students currently enlisted in the military, **MUST** contact a member of the FRCC Veteran Services staff every semester and submit a VA certification request form before VA enrollment certification will occur. Students using VA educational benefits must adhere to VA guidelines in order for benefits to be certified. This includes immediately notifying FRCC Veteran Services staff of any class schedule changes. Audited courses, online developmental courses, and courses not applicable to a declared program of study cannot be approved for VA educational benefits.

Students using VA educational benefits must maintain satisfactory academic progress (SAP) while attending FRCC. Please refer to the FRCC Academic Progress Policy. Academic progress is reported to the VA Educational Benefits Office every semester, and failure to successfully complete a course may result in repayment of VA benefits. An incomplete grade does not affect VA educational benefits unless the incomplete is changed to a grade that lowers the student's cumulative GPA. The Academic Progress Policy may then apply.

Use of VA educational benefits requires time for processing. Students are encouraged to call or email FRCC Veteran Services staff with questions and certification requests early in the registration process every semester. The VA educational benefits office requires prior training and transcripts from previous colleges to be officially evaluated within two semesters. Failure to comply with transcript evaluation within stated timeframe will prevent VA enrollment certification. For more information on VA educational benefits, please check with your local VA office or go to www.gibill.va.gov.

Student debt to the Department of Veteran Affairs or FRCC could result from student enrollment changes or changes in benefit eligibility. Any courses that are dropped after the first day of class could result in a student debt to the VA for repayment of any funds associated with the dropped course. The dates of eligibility election, end of benefits and decreases in eligibility percentage while enrolled at FRCC may affect the funds received from the VA, resulting in student debt to FRCC.

Military Tuition Assistance is available for all branches of the military through the student's military unit. Tuition assistance programs cover the cost of tuition only; any remaining balance for books and fees will be the responsibility of the student. Authorizations and/or vouchers are due by the payment deadline to avoid being dropped for non-payment. Tuition Assistance program eligibility and requirements vary, so please refer to your unit or the websites below for more information.

Air Force: www.my.af.mil

Army: www.goarmyed.com

Army/Air National

Guard: <https://www.colorado.gov/pacific/dmva/tuition-assistance-cong>

Coast Guard, Marine,

Navy: <http://www.military.com/education/money-for-school/tuition-assistance-ta-program-overview.html?comp=1198882857072&rank=3>

LEARNING OPTIONS

To meet the diverse needs of students, Front Range Community College offers a variety of ways for students to reach their educational goals.

Classroom Instruction (Traditional)

Classroom instruction includes a minimum 15 hours of personal contact per credit hour. Instruction may include lectures, small group discussion, labs, fieldtrips, or other in-person delivery methods. Some content may be delivered online.

Hybrid Courses

FRCC hybrid courses are courses that combine online and on-campus instruction. Online instructional activities are substituted for a portion of the required scheduled course time. Internet access and computer literacy are required.

Online Learning

FRCC Online Courses

Online courses cover the same material as regular classroom courses. Specially prepared instructors use online course sites, podcasting, and other techniques to build an online community of learners. Internet access and computer literacy are required. For more information about FRCC Online courses, including how to set up your computer for online courses, go to www.frontrange.edu/online.

CCCOOnline Courses

FRCC students may also enroll in online courses offered by the Colorado Community College System. CCCOnline courses are taught by instructors across the Colorado Community College System and appear as FRCC credit on your transcript. Internet access and computer literacy are required. For more information about CCCOnline courses, go to www.cconline.org.

Late-Start and Accelerated Courses

Late-start and accelerated courses offer fast-paced, intensive learning options for motivated students. Late-start courses have a start date later in the semester than traditional courses. For both, the same amount of content is covered over a shorter period of time.

Evening and Weekend Courses

Like traditional classroom instruction, evening and weekend courses include lecture, small group discussion, labs, field trips, and other in-person and online delivery methods.

Learning Communities

Learning Communities are designed to enhance student learning by pairing one developmental-level course (CCR) and one transfer-level course, or two transfer-level courses. Two professors guide the learning by integrating assignments. Both classes are enrolled with the same small group of students and are scheduled back-to-back.

Concurrent Enrollment

There are many opportunities for high school students at FRCC. Qualified students are welcome to attend independently, or as

part of a program sponsored by their local school district. The options are outlined below.

- **College Now - High School Select** - Take courses at your high school for both high school and college credit by either FRCC-approved high school instructors or FRCC faculty. Tuition and fees are covered by the school district, but students may be responsible for textbooks and fees.
- **College Now - Campus Select** - Take classes with college students on campus at FRCC for both high school and college credit. Tuition is covered by the school district, but students may be responsible for textbooks and fees.
- **College Now - Career Pathways** - At our Larimer Campus in Fort Collins, high school students can participate in one of nine Career and Technical Education programs, such as Law Enforcement Exploration or Automotive Technology. Most programs are held on campus at FRCC. Tuition is covered by Poudre and Thompson School Districts, but each program requires a moderate student fee. Learn more about the Career Pathways programs at www.frontrange.edu/Academics/High-School-Programs/Larimer-Career-Pathways/.
- **College Now - ASCENT** - The ASCENT program allows high school students to remain enrolled at their home high school for a fifth year, and take all classes at FRCC. There is no tuition cost to students for participation in this program, but students are responsible for fees and textbooks.

Gateway to College

The Gateway to College Network is part of the Early College High School Initiative funded by the Bill & Melinda Gates Foundation. In this program you will earn your high school diploma and college credits too. The program covers tuition and books for up to 12 credits per semester, while students pay their student fees. Students must meet all program requirements to continue participating in the program. All classes are held at the Westminster Campus of Front Range Community College. Learn more about the Gateway to College program at www.frontrange.edu/Prospective-Students/Admissions/Gateway-to-College/.

Community Learning Options

English as a Second Language (ESL) Courses

Many students come to FRCC from other countries and may need help with their English speaking, writing, reading, and listening skills. Our experienced instructors are experts in teaching English as a Second Language (ESL). Learn more about our ESL classes offered at each of our locations by going to www.frontrange.edu/Academics/ESL/.

GED Preparation and GED Testing

FRCC offers courses to prepare students to take the GED test, and administers the GED exam at many of our locations. The Colorado GED Test is for candidates 17 years of age and older who have never been awarded a high school diploma or an equivalency diploma. For more information about our GED

preparation courses or the GED test, go to www.frontrange.edu/Academics/GED-Testing/.

The Center for Adult Learning (Larimer Campus)

The FRCC Center for Adult Learning offers English as a Second Language (ESL), GED Preparation and basic reading, writing, and math classes to adults 17 and older. For more information regarding ESL classes go to <http://www.frontrange.edu/Academics/ESL/Larimer/>. For more information regarding GED Preparation and basic reading, writing, and math classes go to <http://www.frontrange.edu/Academics/General-Educational-Development/Larimer/Larimer-Campus.aspx>.

Non-Credit Courses

FRCC Continuing Education provides affordable non-credit professional development and personal enrichment programs. Choose from a wide variety of classes that are offered at our different campus locations and online. Whether you're looking for non-credit classes to improve your professional skills or start a new hobby, learn a new language, create and explore the arts, or discover new interests, our continuing education classes might be just what you are looking for. For more information and current class offerings at each of our locations, go to www.frontrange.edu/Academics/Continuing-Education/.

Small Business Development Center

FRCC offers free counseling and workshops to entrepreneurs and small businesses. The workshops cover a wide range of topics including starting a business, legal issues, financial analysis, marketing strategies, management development, technology, and more. Our Small Business Development Centers are the result of a partnership among the Colorado Office of Economic Development, the U.S. Small Business Administration, and Front Range Community College. For more information or to schedule a counseling appointment, go to www.frontrange.edu/About-Us/Corporate-Solutions-and-Small-Business-Development/.

Corporate Solutions

FRCC's Corporate Solutions office is an excellent resource to Colorado companies seeking customized skills training, consulting services, business development, and ongoing professional development. For more information, go to www.frontrange.edu/About-Us/Corporate-Solutions-and-Small-Business-Development/.

SUPPORT SERVICES FOR STUDENTS

FRCC provides a wide range of services to help you reach your academic, career, and personal goals.

Academic Advising

Academic advising is required for all new students and encouraged for continuing students. Advisors assist students in clarifying goals, exploring career options, and selecting courses and programs in order to:

- Earn a certificate or an associate degree
- Transfer to a four-year college or university
- Strengthen academic skills in English, mathematics, and other areas
- Upgrade job skills
- Satisfy personal interest

Bookstores

The Boulder County, Larimer, and Westminster Campus bookstores provide textbooks, school supplies, FRCC clothing and merchandise, gifts, snacks, and more. The Brighton Center has limited bookstore hours during the first week of each semester. Textbook titles vary from campus to campus, and it is recommended that students purchase books at the campus where they attend class. Students can also order textbooks online through eWOLF.

Campus Security and Preparedness / Accident Reports

At each of our FRCC campuses, we strive to provide a safe and secure educational and work environment for students, faculty, and staff. Our campus security personnel perform these services:

- Patrol all campus buildings, parking lots, and grounds while enforcing system policies and college rules, regulations, and procedures
- Respond to all emergency and non-emergency calls on campus
- Open and close all campus buildings and maintain lost and found
- Investigate and provide detailed reports of all campus incidents, student or employee injuries, minor vehicle accidents, vandalism, and theft
- Provide emergency first aid and CPR
- Give safety presentations
- Provide personal safety escorts to students, staff, and faculty
- Monitor security cameras

If an injury occurs on campus, the injured party should report the accident immediately. Injuries should be reported to Campus Security & Preparedness at the Boulder County, Larimer, and Westminster Campuses and to the Office of the Director at the Brighton Center.

Career Counseling

Front Range offers free career counseling on each campus. If you are not sure of your career path, or just want to explore other alternatives to the path you have already chosen, you might find it beneficial to schedule an appointment with one of our experienced career counselors who will help you identify your particular strengths, goals, and interests. You will be able to discuss the career options and work environments that have the best "fit" for you with your career counselor. To schedule an appointment, go to www.frontrange.edu/careerservices/.

Computer Labs and Printing

Each campus of FRCC provides computer labs for student use. The lab computers run on Microsoft Windows, have internet connectivity, are connected to printers, and are equipped with software used in classrooms. Lab assistants are available to help with basic computer problems.

Crisis Counseling and Stress Management

FRCC offers crisis counseling services to assist students in solving problems that may interfere with success in college. These services may include referrals for community counseling or intervention services.

Disability Services

Accommodations are provided by request for students who document disabilities through the Office of Disability Support Services at each campus. For more information, go to www.frontrange.edu/Current-Students/Learning-Resources-and-Support-Programs/Disability-Services.

Fitness Centers

Larimer Campus and Westminster Campus Fitness Centers are fully equipped fitness facilities with strength training equipment, free weights, and state-of-the-art cardiovascular machines. A variety of fitness classes are offered each semester, and fitness and wellness workshops and programs are conducted on a regular basis. For information on fees, orientation schedules, and more, contact the Larimer Campus Fitness Center at 970-204-8351 or visit the Center in LP-113. For the Westminster Campus Fitness Center, call 303-404-5159 or visit the Center in room B-0607.

Food Service

- Boulder County Campus - Located in the C building, the Café offers fresh baked goods, snacks, grab-and-go sandwiches, coffee, tea, and other items.
- Larimer Campus - Located in the Longs Peak Student Center, the Peak Café offers a variety of snacks, beverages, and pastries baked fresh daily. In addition, deli sandwiches, pizza, burgers, wraps, soups, and salads are part of the daily menu. Daily specials include Mexican, Italian, and vegetarian dishes. The Peak Café offers a full service salad bar as well as grab-and-go items.
- Westminster Campus - Located in the Campus Center, the Front Range Bistro offers a variety of snacks, beverages, and pastries baked fresh daily. Deli sandwiches, pizza, burgers,

wraps, soups, and salads are part of the daily menu. Front Range Bistro also offers grab-and-go items and a salad bar.

- Vending machines are available at all campuses and centers.

Job Search and Internships

Job search assistance is available at the Boulder County, Larimer, and Westminster Campuses for students seeking jobs and career guidance. The Westminster Campus also serves Brighton Center students. Resources include:

- Front Range Connect - an online job posting system
- Job search skills, resources, and workshops
- Labor market data
- Resume writing assistance
- Career fairs

Internships offer students the opportunity to earn college credit and gain practical work experience under the supervision of an experienced employer and college faculty member. Many program areas require internships for program completion. In programs that do not require an internship, it may be an approved substitute or elective. Contact program faculty for more information.

To participate in an internship, students must have:

- Completed a minimum of 15 credit hours in their program of study
- Maintained a cumulative GPA of 2.0
- Completed an internship application with a faculty recommendation
- Obtained an internship job placement prior to enrollment in the internship course

Students are encouraged to apply for the internship at least one semester before the semester of internship. Assistance with obtaining an internship job placement is available on each campus. Students should consult an advisor regarding the transferability of internship credit.

Learning Support Services

FRCC offers a variety of services to provide students with academic assistance. Students are encouraged to take advantage of these free resources to create a successful experience at FRCC.

The Student Success Center on the Boulder County Campus provides a positive atmosphere for students to be active participants in their academic success. The Center supports students by connecting them with appropriate campus resources such as tutoring, academic support labs, academic coaching, career counseling and advising resources.

The Learning Opportunity Center on the Larimer Campus provides instructional assistance to support a variety of FRCC courses. Services are delivered through individualized and small group tutorials and drop-in math, accounting, writing, science, computer and economics help center sessions. The Learning Opportunity Center is located in the Blanca Peak building room 102.

The Writing and Academic Skills Center and Math Lab on the Westminster Campus assist students in all courses with one-on-one writing and math help, and discipline specific skills labs. The Writing and Academic Skills Center is located in room B-1051 and the Math Lab is located in room B-0854.

Brighton Center's Learning Development Center provides drop-in tutoring in English, mathematics, and other subjects. Additionally, Skills Tutor software provides assessment and customized lesson plans for skill improvement.

Libraries

Front Range Community College offers a wide range of library services to its students, faculty, staff, and, on some campuses, the public. Our Westminster Campus shares its library with the City of Westminster. Our Larimer Campus shares its library with the Poudre River Public Library District. And at our campus in Boulder County, a vast online database combined with local library resources help students meet their library research needs. Students in Online Learning programs have access to their home campus library in addition to a variety of library subscription databases.

In the libraries, staff members provide expert assistance and a variety of materials, including books, magazines, professional journals, newspapers, indexes, and other printed sources. The libraries also provide online access to academic databases and e-books. These online resources can be accessed on or off campus.

FRCC libraries participate in partnerships that allow students to check out materials from other Colorado libraries, including the University of Colorado and Colorado State University. Inter-library loan service is also provided, which allows students to obtain books, articles, and media from other libraries.

All FRCC libraries have strong bibliographic instruction programs to assist students in successfully using the information resources available to them. Electronic classrooms on all campuses allow for demonstration and practice of searching databases.

Student Activities, Clubs, and Organizations

College isn't all about attending classes. It's about making friends, discovering yourself, and exploring your interests - all while learning to balance school and life. FRCC Student Life provides a variety of fun and challenging activities that enhance personal growth and well-being. Students have many opportunities to get involved with their peers in a positive, comfortable, and safe environment. For a listing of upcoming campus activities, go to www.frontrange.edu/StudentLife/ and click on your campus page, or visit the Student Life Office on your home campus.

Make the most of your time at Front Range Community College by joining one or more student organizations or clubs. Any student enrolled at FRCC is free to join any officially recognized student club or organization, although some clubs require a minimum GPA. Campus clubs promote common interests and leadership development. For a listing of current and active clubs and organizations, or for information on how to start your own club, go to www.frontrange.edu/Current-Students/Student-Life/ and click on your campus page, or visit the Student Life Office on your home campus.

The Student Government Association is a forum for all students to impact their college environment. Members of the Student

Government Association address issues relating to student rights and FRCC policies and procedures and are part of a statewide network dedicated to building better student government. SGA members strengthen their organizational and personal skills and gain valuable experience that will apply to other roles they assume in their lives and careers. Elections for Student Government positions occur during the spring and fall semesters. To get involved with SGA, contact the Student Office.

Support for Students of Concern

WE CARE: Throughout the semester, we all go through ups and downs. Please know that we are here to help, and you never need to worry alone. If you are concerned about someone or yourself, please let us know. Visit www.frontrange.edu/care.

Testing Centers

The FRCC Testing Centers provide a comprehensive array of testing services, including placement tests, exams for online courses, and administration of national exams for college credit or licensure. Examples include CLEP, DSST, GED, LSAT, MPRE, and NBCC. Some campuses are authorized Pearson Vue test centers. In addition, the centers proctor exams from other institutions. For more information on the services offered at your home campus testing center, go to www.frontrange.edu/testing.

Tutoring

FRCC offers a variety of tutoring options at each campus, including individual, small group, and drop-in sessions. Services are free to qualified students. For more information, go to www.frontrange.edu/tutoring.

Veteran Support Services

Veteran Services at Front Range Community College provides specialized services to veterans, eligible dependents, active duty service members, members of the Selected Reserve, and REAP recipients, as defined by the appropriate chapters of the GI Bill. Our staff assists students using their Department of Veterans Affairs educational benefits. For more information, go to www.frontrange.edu/veterans.

ACADEMIC MATTERS

FRCC has guidelines and standards to inform students of FRCC expectations. The following is a summary of the information students need to know. If needed, any member of the Student Services staff can help you understand these policies, standards, rights and responsibilities.

Academic Standing Procedure

Academic Standing applies to all students who have attempted 9 or more credits at a CCCS college, regardless of the number of term credits they attempt from that point forward. Academic Standing is determined following the posting of the majority of term grades for each semester. Students placed on probation or suspended (see definitions below) will be notified of their status. Suspended students will not be allowed to attend any CCCS college in the subsequent semester/s unless an appeal is approved (see appeal procedures below). Academic Standing status will be noted on the advising, official, and unofficial transcripts. The Academic Standing of a student is not specific or limited to the home institution; it does impact a student's enrollment at other CCCS colleges, as per CCCS ES 4-81.

Recognizing the value of measuring academic progress for all students, the Colorado Community College System (CCCS) has established the following procedure for measuring and notifying students of their academic standing. This procedure is intended to be informational and helpful, but also establishes clear standards of academic progress that must be met and maintained in order to be a successful student. **A student's academic standing at FRCC will impact academic standing at another CCCS college.**

All FRCC students are expected to achieve satisfactory academic progress. For students who have attempted fewer than nine (9) credit hours, the college will monitor academic progress through an Academic Alert process. These students are not subject to Academic Standing.

Definitions, Standards and Practices

- Abbreviations: Cumulative Grade Point Average = CGPA; Term Grade Point Average = TGPA.
- Only courses taken "in residence" will be used for this procedure; "in residence" means taken at the student's home institution. Courses taken elsewhere and transferred in do not apply. The GPA calculations for this procedure may not match those used for financial aid purposes or athletic eligibility.
- Academic Standing applies to all students who have attempted 9 or more credits while attending a college in the Colorado Community College System.
- During the student's first 8 credit hours of enrollment of college level coursework, FRCC will monitor satisfactory progress through the Academic Alert process.
- Initial Standing is assigned to students who have attempted **fewer than 9** cumulative credit hours with a CGPA of greater than or equal to 2.00 for all classes attempted.
- Academic Alert is assigned to students who have attempted **fewer than 9** cumulative credit hours with a CGPA of less than 2.00.
- Good Standing is assigned to students who have attempted **at least 9** cumulative credit hours and have a CGPA of greater than or equal to 2.00 for all classes attempted.
- Academic Probation is assigned to students who have attempted **at least 9** cumulative credit hours and have a CGPA of less than 2.00 for all classes attempted.
- Students who raise their CGPA to at least 2.00 during the Academic Probation term will be returned to Good Standing for the subsequent term.
- Students who earn a TGPA of at least 2.00 for all classes attempted during the Academic Probation term, but fail to raise their CGPA to 2.00 or above will be allowed to attend the next term, but will remain on Academic Probation. This is called Probation (Continuing).
- Students who earn a TGPA of less than 2.00 for all classes attempted during the Academic Probation term will be suspended and will not be allowed to enroll at any CCCS college for the next term, excluding summer term (as summer term may not be used as a "suspension term").

Academic Suspension Rules

- Summer term may **not** be used as a "suspension term".
- Summer term may be used to remediate (improve) the GPA. If a student wishes to enroll for summer term after being suspended, they will need to follow their home institution's appeal process.
- Initial suspension is for one term, excluding summer term.
- A second suspension is for two terms, excluding summer term.
- If a student **who has served the suspension time for initial suspension or second suspension** wishes to return, the student will be allowed to re-enroll only after meeting with an academic advisor at the CCCS college that the student wishes to attend. The student will be placed on Academic Probation. (See FRCC Academic Suspension Procedures).
- A third suspension is for two full years, or 4 academic terms excluding summers.
- If a student who has served the **third suspension time of two years** wishes to return, the student must meet with an academic advisor at the CCCS college that the student wishes to attend in order to get the suspension lifted.

Academic Suspension Appeals

- Students may appeal their suspension based on procedures developed by their home college or the CCCS college they wish to attend. At a maximum, students may appeal to their home college and to one other CCCS college of their choice.
- If the student's suspension appeal is approved, the student will be placed on Academic Probation.
- If the student's suspension appeal is not approved, the student may be dropped from all courses registered for the upcoming terms at their home college. Students are ultimately responsible for their enrollment and need to check their enrollment schedule for accuracy.

- The student needs to check with their home college regarding enrolling for summer term classes.

FRCC Academic Suspension Procedures

- A student who has been placed on initial or second academic suspension status by any CCCS college may appeal the suspension for unusual or mitigating circumstances by meeting with an academic advisor and submitting an academic plan to the Dean of Student Services for approval. A student who is approved for enrollment will remain on academic probation (continuing) and must complete the semester with a TGPA of 2.00 to continue enrollment.
- A student who has been placed on third suspension status by any CCCS college will not be permitted to appeal and must serve the two year suspension.

Academic Renewal Policy

The purpose of academic renewal is to allow a student the opportunity to remove a maximum of 30 semester credit hours of unsatisfactory academic performance from the GPA calculation. Only grades of D and F are eligible for academic renewal and exclusion from GPA calculation.

A student applying for academic renewal must meet the following criteria:

1. The student must have zero attempted credits at FRCC for two or more academic years, which is six consecutive semesters, before being eligible to apply for academic renewal.
2. The student must be enrolled at FRCC and have completed at least 6 credit hours with a 2.0 term grade point average to be awarded academic renewal. For Reverse Transfer Degree only, the student may fulfill this requirement by demonstrating enrollment in at least 6 credit hours with a 2.0 term grade point average during the last semester of attendance at the four-year institution.
3. Students can only apply for academic renewal once, and it is not reversible.
4. Students applying for academic renewal must complete the Academic Renewal Application Form in consultation with their academic advisor.

If awarded academic renewal, the original grades and credit hours remain on the permanent academic transcript. A notation indicates that academic renewal has been awarded, and the GPA has been adjusted. Credit excluded from the GPA calculation cannot be used to satisfy the requirements for completion of an FRCC certificate or degree.

A student concerned about a poor academic record is encouraged to meet with an advisor to discuss FRCC's other academic progress options and strategies for academic success.

The Academic Renewal Policy is only applicable to classes taken at Front Range Community College. Other institutions receiving an FRCC transcript for transfer are not bound by this college policy and may choose to calculate the student's transfer GPA to include all grades, even those excluded by FRCC under this policy.

Students applying for academic renewal are responsible for investigating the impact of renewal on transfer admission, financial aid, remaining COF stipend eligible hours, VA education

benefits, and other agencies' policies. For clarification of the scope and definition of this policy, speak with your academic advisor.

Credit Completion Progress Standard

Credit Completion Progress standards apply to all students who have attempted 9 or more credits at a CCCS college, regardless of the number of term credits they attempt from that point forward. Credit Completion Progress is determined following the posting of the majority of term grades for each semester. Students placed on warning 1, warning 2 or warning 3 will be notified of their status. Credit Completion Progress status will be noted on the advising and unofficial transcripts only. It will not be noted on the official transcript. The Credit Completion Progress status of a student is specific to the home institution and does not impact a student's enrollment at other CCCS colleges.

For students who have attempted fewer than 9 credit hours, the college will monitor credit completion through an Academic Alert process. These students are not subject to the Credit Completion Progress guideline.

Recognizing the value of credit completion for all students with regards to retention, transfer and credential attainment, the Colorado Community College System (CCCS) has established the following practice and procedures for measuring and notifying students of their credit completion progress. This procedure is intended to be informational and helpful, but also establishes clear standards of credit completion progress that must be met and maintained in order to be a successful student in our colleges.

Definitions, Standards and Practices

- Credit Completion Progress: All credit bearing classes (developmental and college level) will be used to calculate the percent of attempted credits passed. This includes summer term courses.
- Only courses taken "in residence" will be used for this calculation. "In residence" means taken at the student's home institution. Courses taken elsewhere and transferred in do not apply. The credit completion rate for this procedure will not necessarily match those used for financial aid purposes or athletic eligibility.
- Grades considered to be passing when computing the percent of attempted credits passed are as follows: A, B, C, D, S/A, S/B, S/C, and S.
- Grades considered to be failing when computing the percent of attempted credits passed are as follows: I, F, U, U/D, U/F, W, and AW
- Course Completion Rate is calculated by dividing the total attempted credits by the number of credits successfully completed as per the definitions above.

Initial Standing: Student has attempted fewer than 9 cumulative credit hours will not be assessed for credit completion.

Good Standing: Student has attempted at least 9 cumulative credit hours and has a cumulative course completion rate of at least 50%.

Warning 1: Student has attempted at least 9 cumulative credit hours and has a cumulative course completion rate of less than 50% for the first time.

Warning 2: Student has attempted at least 9 cumulative credit hours and has a cumulative course completion rate of less than 50% for the second time.

Warning (Continued): If a student on Credit Completion Probation passes 50% or more of their attempted term credits, but fails to raise their cumulative completion rate to 50%, they will be allowed to continue the next term, but will remain on Credit Completion Probation.

Warning 3: Student has attempted at least 9 cumulative credit hours and has a cumulative course completion rate of less than 50% for the third time.

Warning Rules:

- Students on Warning 1 will receive a communication regarding their credit completion status and will be given information on resources, best practices, etc.
- Students on Warning 2 will receive a communication regarding their credit completion status **and** will have a credit completion hold (which will impact registration) placed on their student account at their home college. The student will not be able to make any changes to their student account until they meet with an advisor.
- Students on Warning 3 will receive a communication regarding their credit completion status **and** will have a credit completion hold (which will impact registration) placed on their student account at their home college. The student will not be able to make any changes to their student account until they meet with an advisor. **The college reserves the right to limit the number of credit hours** that the student may take when a student is on Warning 3 status.

Grades

Achievement in a course is measured by meeting specific course objectives. At the beginning of a course, the instructor explains objectives and the criteria by which grades are assigned. For the following grade descriptions, "achievement" may be defined as successfully reaching a level of knowledge, understanding or competency. A satisfactory, or "S" grade, is a "C" or better.

Grades are issued at the end of each semester and are not mailed. Students may access grades by logging into their account in eWOLF through www.frontrange.edu.

A	Excellent or Superior
B	Good
C	Average
D	Deficient
F	Failure
I	Incomplete
S	Satisfactory
U	Unsatisfactory
S/A	Satisfactory (A-level) work in a designated developmental course
S/B	Satisfactory (B-level) work in a designated developmental course
S/C	Satisfactory (C-level) work in a designated developmental course
U/D	Unsatisfactory (D-level) work in a designated developmental course
U/F	Unsatisfactory (F-level) work in a designated developmental course
W	Withdrawal
AW	Administrative Withdrawal
AU	Audit
CPL	Credit for Prior Learning
CR	Credit
IP	In Progress
NC	Non-Credit
R	Repeated Course
SP	Satisfactory Progress
Z	Grade not yet reported

Grade Definitions:

AU - Audit:

By auditing a course, a student may participate in course activities, but does not receive a formal transcript grade. Students must indicate intent to audit a course by the deadline. Audited courses are not eligible for the College Opportunity Fund stipend. Students will be responsible for the full in-state or out-of-state tuition. Audited courses do not meet the credit hour requirements for financial aid or veteran benefits and may not be applied to certificates or degrees. Course credits for which an AU is earned will not count in Attempted Hours and Earned Hours. No Quality Points will be assigned, and there will be no impact on either the Term or Cumulative GPA.

I - Incomplete Grade:

The "Incomplete" grade is a temporary grade and is designed for students who, because of documented illness or circumstances beyond their control, are unable to complete their coursework within the semester, but have completed at least 75% of all

course assignments and tests in a satisfactory manner with a grade of "C" or better.

If circumstances beyond the student's control prevent the student from completing a test or assignment at the end of the term, it is the student's responsibility to initiate the request for an "Incomplete" grade from the instructor. The instructor determines whether the student has a reasonable chance of satisfactorily completing the remaining course activities in a timely manner.

The instructor will complete and sign an "Incomplete Grade Contract" and will submit it to Admissions and Records with final grades for the semester. The Admissions and Records Office will send a copy of the "Incomplete Grade Contract" to the student. The incomplete grade will be assigned on the class roster at the time of the submission of grades.

Students are encouraged to inform instructors, as soon as possible, if they are having difficulties with any part of the course. In the event that a student and instructor cannot reach resolution concerning an Incomplete, then the student should contact the Dean of Instruction at their campus.

Military personnel and emergency management officials who are required to go TDY in the middle of a semester should contact their instructor for special consideration. Documentation of official TDY assignment is required. Other options are available depending on the time frame. Please see your Campus Veteran Services Counselor to determine which option is best for you.

Incomplete grades which are not converted to a letter grade by the instructor after one subsequent semester (not including summer semester) will revert to the default grade specified in the Incomplete Grade Contract.

S - Satisfactory:

An "S" grade indicates that the quality of student work in the course is equivalent to "C or better". "S" grade will count in attempted and earned credits, but will not carry any quality points. Therefore, "S" grades will not be included in GPA calculations. It may not be applied to any course in the Colorado Guaranteed Transfer Program for General Education. No course taken for an S/U grade may be applied to the AA/AS degree with the exception of physical education courses, and in that case, no more than six semester hours may be applied to the Associate of Arts or Associate of Science Degree.

U - Unsatisfactory:

A "U" grade indicates the quality of student work in the course is equivalent to a "D" or less. It may not be applied to any degree requirements.

S/A, S/B, S/C:

These are satisfactory grades awarded only for developmental courses. The A, B, and C indicate the level of satisfactory performance. These grades are not included in the GPA calculation, but may impact financial aid eligibility. The course will count in attempted credits, but will not generate earned credits.

U/D, U/F:

These are unsatisfactory grades awarded only for developmental courses. The D and F indicate the level of unsatisfactory performance. These grades are not included in the GPA

calculation, but may impact financial aid eligibility. The course will count in attempted credits, but will not generate earned credits.

W-Withdrawal:

The "W" or withdrawal grade is assigned when a student officially withdraws from a course. A grade of withdrawal may only be processed during the first 80% of the course. No academic credit is awarded. The course will count in attempted credits.

AW - Administrative Withdrawal:

The "AW" or administrative withdrawal grade is assigned by the college when a student has been administratively withdrawn. No academic credit is awarded. The course will count in attempted credits.

SP - Satisfactory Progress:

This temporary grade symbol is assigned to certain approved courses that extend beyond the end of a normal semester. No academic credit is awarded until the course is completed.

Z - No Grade Submitted:

This temporary grade symbol is assigned by the Registrar when a grade is not received from the course instructor. This grade is replaced and credit awarded upon assignment of a grade by the instructor.

Repeat field Indicators - I or E:

Assigned for repeated courses on the student's transcript, an "I" will indicate include in earned hours and GPA calculation or an "E" will indicate exclude from earned hours and GPA calculation.

Last Day of Attendance:

Faculty is required to provide the last day of attendance for each student who is awarded an F or U/F grade. In addition, if faculty assign a W, then the last date of attendance is also required.

Grades Required for Certificates and Degrees

Students must earn a grade of C or better for all courses applied toward award of any Associate of Arts, Associate of Science, Associate of General Studies, or Associate of Applied Science degree. Students must earn a grade of C or better for all courses applied toward award of any certificate. Students matriculated prior to 2009-2010 and continuously enrolled may still be able to apply a grade of D toward their program if the program allowed it per the catalog for the year in which they first matriculated. Some programs or courses also require that students achieve specific grades or GPAs to continue in the program. See the Programs section of this catalog for requirements.

Academic Appeal Procedures

1. Statement of Purpose

To secure equitable solutions to problems of an academic nature that affects a student's academic progress.

2. Basis for an Academic Appeal

An academic appeal may be initiated in the following areas:

- Denial of program completion/graduation
- Academic dismissal from a program
- Final grades

Note: Appeals/grievances of a non-academic nature are handled by the Dean of Student Services in accordance with the current student grievance procedure.

3. Procedure

1. Informal Appeal - This process must be used first. The student and instructor should attempt to resolve the problem on an informal basis whenever possible. If this fails, the student may meet with the instructor and the department chair to resolve the issue. If the issue is not resolved in the informal process, the student may initiate the formal appeal process.
2. Formal Appeal - A formal appeal must be initiated according to the procedures and timelines listed below:
 - Final grade appeals must be initiated by the student within thirty calendar days of the awarding of the grade.
 - Denial of program completion/graduation or academic dismissal appeals from any program must be initiated within ten calendar days following the notification to the student.
 - The student may initiate a formal appeal by submitting a written statement to the Dean of Instruction describing the exact nature of the complaint and the remedy the student is seeking. Appeals may be submitted outside the timelines indicated above only if documented extenuating circumstances exist. These circumstances must be fully explained in the written appeal request and accompanied by the supportive documentation. Acceptance of late appeals will be at the discretion of the instructional dean.
 - The Dean of Instruction will convene an administrative hearing.
 - Participants in the administrative hearing will include the student, the instructor, and the Dean of Instruction. If the instructor is unavailable, the department chair will represent the instructor.
 - The student and the instructor may submit written statements by other individuals having information regarding the complaint.
 - After the hearing, the Dean of Instruction will review all oral and written statements and reach a decision. Both student and instructor will receive written notification of the decision within ten calendar days after the hearing.

Petition for Review of Due Process: After the appeals decision by the Dean of Instruction, the student may submit a written request to the campus Vice President for a process review of the appeals proceedings. The Petition for Review must be submitted within ten calendar days of the written notification of the initial decision. Failure to meet the ten-day deadline for a written request for review will result in the initial decision made by the Dean of Instruction being final and not subject to additional review. All decisions of the Vice President are final.

Grade Point Average:

Grade points measure the level of achievement for the credit hours completed. To calculate the GPA, multiply the number of grade points by the number of credit hours received for each course. Total the number of credits and the number of grade

points separately. Divide the total grade points by the total credits.

A = 4 grade points

B = 3 grade points

C = 2 grade points

D = 1 grade point

F = 0 grade points

Course	Credits	Grade	Grade Points	GPA
MAT 121 College Algebra	4 cr.	C (2 pts)	8	2.0
HWE 110 Fitness Condition.	2 cr.	A (4 pts)	8	4.0
ENG 121 English Comp I	3 cr.	B (3 pts)	9	3.0
BIO 105 Science of Biology	4 cr.	B (3 pts)	12	3.0
TOTALS	13	Credits × Grade Point Total ÷ Total Credits =GPA	37	2.845

Note: Credits transferred to FRCC from other institutions and developmental-level courses are not calculated in the GPA on the FRCC transcript.

Repeated Courses

All FRCC courses may be repeated. Limits apply (see below). Courses transferred from other institutions do not apply to this policy. Each registration for the course and each grade received will be listed on the transcript. On the transcript a notation will follow the course indicating that the course was repeated and designating whether the course will be included or excluded from the GPA. The highest grade will be used in the GPA calculation. In the event that the same grade is earned two or more times for a repeated course, the most recent instance of the duplicate grade will be included in the term and cumulative GPA. All other duplicate grades will be excluded from the term and cumulative GPA. For students classified as Resident for tuition purposes, all credit hours earned for initial and repeated courses will be deducted from the student's COF stipend eligible hours. Repeating a course may impact the student's financial aid eligibility.

Repeated courses may be applied only one time to a certificate or degree, except for variable credit courses that may have up to 6 credits of the same course applied.

Repeat Course Limits

In order to increase retention and student success, Front Range Community College has the following limits with regard to repeated courses:

- Students will be limited in the number of times that they can take the same course
- Certain courses are exempt from the repeat course procedure due to the nature/offering of the course
- If a student has taken a course and attempts to register for the course a second time, the student will receive an automated notification of possible financial aid implications, available support services, and how to access those services
- If a student has taken a course twice and attempts to register for the course a third time, the student will not be able to register for that particular course until an academic action plan is created and approval granted by their academic advisor.
- If the academic advisor does not feel that the registration is warranted, the student may appeal to the Dean of Student Services by submitting a copy of his or her academic action plan and a personal statement outlining the reason for the request to repeat the same course multiple times. The Dean of Student Services will respond to the appeal within 15 calendar days.
- If a student has taken a course three times and wants to register for the course a fourth time, the student must appeal to the Dean of Student Services by submitting a copy of his or her academic action plan and a personal statement outlining the reason for the request to repeat the same course multiple times. The Dean of Student Services will respond to the appeal within 15 calendar days.

Term Academic Honors

FRCC provides an opportunity for students to be recognized with Academic Honors, on a term-by-term basis. The College has three recognized Honors: (1) Dean's List, (2) Vice President's List, and (3) President's List. Students who qualify will receive a notation for that term on their official transcripts. Students must complete a minimum of 12 college-level credits during the term to be eligible for this recognition.

Term GPAs required to qualify for these Term Academic Honors are as follows:

Honor	Required Term GPA
Dean's List	3.50 – 3.749
Vice President's List	3.75 – 3.999
President's List	4.00

Graduation Honors

Graduation honors recognize outstanding academic achievement throughout a student's academic career. The honors are awarded to students who complete the requirements for an associate degree, complete at least 30 credit hours at FRCC, and earn a 3.5 or better cumulative GPA at FRCC. Only completed college-level courses taken at FRCC will be included in the GPA calculation used for graduation honors. The three levels of recognition are defined as follows and will be posted on the student's transcript:

Honor	Required Cumulative GPA
cum laude ("with honor")	3.50 - 3.749
magna cum laude ("with great honor")	3.75 - 3.99
summa cum laude ("with highest honor")	4.00

Graduation Requirements

Here's how to prepare for graduation:

STEP 1: At least one semester before you graduate log into eWOLF and look at your DegreeCheck (located on your Student Tab/My Student Information). DegreeCheck is an online degree audit system. If you have questions please see an academic advisor.

STEP 2: If you have credit from another institution that you wish to apply toward your program of study at FRCC, complete a transfer credit evaluation request form by the graduation deadline for the term in which you wish to graduate and request that official transcripts from other institutions be mailed directly to FRCC. (Official transcripts by definition are mailed from one school to another. FRCC cannot accept transcripts that are hand delivered.) Submit this form to the Admission and Records Office at your campus. If you have approved credit for prior learning, the approval forms must also be submitted by the graduation application priority deadline.

STEP 3: Apply for graduation by the priority deadline for the term in which you wish to graduate. Note that:

- The name you request to be printed on your diploma must match college records. To update your records, complete the demographic change form
- The certificate/degree program on your graduation application must match your declared major. Log into eWOLF to see your declared major
- A separate graduation application is required for each certificate/degree

Degree and Certificate Requirements

For Degrees students must:

- Complete a minimum of 60 semester hours for the Associate of Arts (A.A.), Science (A.S.), or General Studies Degree (A.G.S.), or a specified number of semester hours for an Associate of Applied Science Degree.
- Complete 15 credit hours of general education coursework for the AAS Degree.
- Earn a grade of "C" or better in all applicable courses.
- Complete a minimum of 15 credit hours toward a degree at FRCC. These 15 credits hours include online courses taught by FRCC; CCCOnline courses also are considered FRCC courses when the student declares FRCC as their home institution.
- To obtain a second degree, a student must meet all degree requirements as well as complete 15 additional semester

hours at FRCC that apply toward the second program of study.

- Provide official transcripts to the college if transfer credit is to be applied.
- Complete a graduation application by the priority deadline and submit to the Office of Admissions and Records.
- If necessary and due to extenuating circumstances, request a course substitution. The request must be documented on the Course Substitution Form and approved by the appropriate dean, Registrar, and Chief Academic Officer. Please note that the A.A. and A.S. Degrees with Designations do not allow for course substitutions.
- Complete the requirements in effect for the officially declared program of study as published in the college catalog. This catalog is effective beginning each Summer Semester for students enrolling at Front Range Community College for the first time. It should be noted that specific catalog requirements are subject to change by the college or its governing agencies. When such changes occur, the college notifies students affected by these changes and provides advising assistance.
- Continuing students who have not had a 12-month lapse in enrollment will be allowed to use the requirements listed in any catalog published while continuously attending the college. Students may not combine requirements from multiple catalogs in order to graduate.

Students may not:

- Apply more than a total of six semester hours of independent study courses, variable credit courses or internship courses to an associate degree program, unless otherwise specified.
- Apply an "S" grade to any Guaranteed Transfer course.
- Apply more than 6 semester hours of an "S" grade to an Associate of Arts or an Associate of Science Degree.
- Use a "U" grade toward any associate degree program.
- Use developmental courses toward any associate degree program.
- Earn a lower academic degree after a higher degree has been awarded.

The hierarchy of academic degrees, from high to low is A.S. Degree with Designation, A.S., A.A. Degree with Designation, A.A. and A.G.S. Exception: Multiple A.A.S. degrees may be earned if degree requirements for each degree are met.

For Certificates students must:

- Complete all course requirements listed in the catalog.
- Earn at least 25 percent of the total certificate credit hours at FRCC.
- Earn a grade of "C" or better for all courses required for the certificate. Please note that some programs require a higher GPA or have minimum required grades above a "C" to be eligible for a certificate.
- Provide official transcripts to the college if transfer credits are to be applied
<http://www.frontrange.edu/transfertoFRCC/>.

- Complete a graduation application by the priority deadline at <http://www.frontrange.edu/Current-Students/Graduation/>.
- Complete the requirements in effect for the officially declared certificate as published in the college catalog. This catalog is effective beginning each Summer Semester for students enrolling at Front Range Community College for the first time. Continuing students who have not had a 12-month lapse in enrollment will be allowed to use the requirements listed in any catalog published while continuously attending the college. Students may not combine requirements from multiple catalogs in order to graduate. It should be noted that specific catalog requirements are subject to change by the college or its governing agencies. When such changes occur, the college notifies students affected by these changes and provides advising assistance.

Commencement

A commencement ceremony is held in May of each year. Students who have been awarded a degree and/or certificate in the academic year are invited to participate in the commencement ceremony. Honors for Spring semester graduates are based on GPAs from Fall semester.

Transcript Requests

Please note the following information when requesting a FRCC transcript:

- Official transcripts are ordered online. Students can request an electronic or paper transcript via the student account in eWOLF or at www.frontrange.edu/transcripts. Electronic transcripts are delivered in a PDF format. Students who are not able to pay with a credit card can contact the Office of Admissions and Records for other options.
- Official transcripts are \$3.00 each for an electronic or paper copy. Same day paper transcript requests are \$10.00 each. Expedited paper transcripts are available for an additional charge.
- Students are able to track transcript order and delivery.
- Transcripts are not released if a student has financial obligations to the college or another college in the Colorado Community College System.
- The college does not certify transcripts that have been sent to FRCC from other institutions.
- Transcripts are released in accordance with FERPA. (See Family Educational Rights and Privacy Act in the Legal Notices section of the catalog.)

Transferring Credit to FRCC

If a student plans to complete a degree or certificate with applicable transfer credit, an official transcript must be sent directly to the college from the institution where the credits were earned. As part of this process, students must complete a Transfer Credit Evaluation Request Form, available from the Admissions and Records Office or online at www.frontrange.edu/transfer.

The transfer of academic credit to the college is governed by the Colorado Community College System (CCCS) College Transfer Guide (ES 9-82) and reads as follows:

- FRCC will only accept transfer credit from post-secondary institutions accredited by one of the six regional accrediting associations. Credits earned at nationally accredited or unaccredited institutions are not transferable to FRCC.
- Courses accepted in transfer MUST match the content and meet or exceed the rigor of the accepting institution as determined by the professional judgment of the transfer evaluator or department chair.
- Transfer credit is accepted as specified by legislated and CCCS articulation agreements.
- The college may examine credits to ensure that the content is not outdated or obsolete. Please note that some courses that are more than 10 years old may not be transferable. In addition, courses must be no more than 7 years old for some health programs (please check with the department).
- Courses will be evaluated against the Common Course Numbering System.
- The official transcript will include courses taken at the institution and those transfer credits requested by the student.
- Courses will be transcribed with CCCNS course number, title, prefix and the number of credits awarded by the transferring institution.
- Grades for transfer courses will be recorded in Banner and show on the official transcript.
- Pre-requisite courses below the 100 level will not be accepted in transfer and will not appear on the transcript, but will be noted in the student's record.
- A grade of "C" or higher, "P", "S" or better is required for transfer. Transfer credit will not be awarded for courses with "D", "F", or "U" grades.
- Credits earned at FRCC with a grade of "D" may be applicable to a degree or certificate as determined by the program. See "Grades Required for Certificates and Degrees".
- There is no limit to the number of credits that may be transferred. However, 45 transfer credits is the maximum number of credits that can be applied towards a degree. A minimum of 25% of the credits applied to a degree or certificate must be earned at FRCC.
- Upper level courses can be accepted in transfer IF the course can be equated to a course in CCCNS.
- Elective courses that do not equate to a CCCNS course will be listed with the appropriate prefix, numbered as 999 and include "Elective" with a colon and then an entry to describe the course content. If no appropriate prefix is included in the CCCNS then the elective course will be given either the prefix TRN for Transfer Elective or CTE for CTE Elective. The course number will be 999 and the title will include a colon and an entry to describe the course content.
- Credit for prior learning, standardized tests and portfolio credits will be accepted as determined by the CCCS Guide to Credit for Prior Learning.
- Transfer courses that have the GT designation will be noted as GT courses. If the course is not present in the CCCNS then it will be transcribed with the prefix GTP for GT-Pathways,

the applicable GTP course number, and the course title that matches the GT designation, eg., CO1, AH3, MA1, etc.

- Transfer credits will be awarded as governed by CCHE and State Board policies and System President procedures.
- Quarter hours and other non-standard credit hours that are accepted in transfer will be converted into semester credit hours.

Transfer of International Credits

Students who have attended international institutions and want their credits evaluated for transfer must first have the international transcripts evaluated by a recognized member of the National Association of Credential Evaluation Services (NACES) and have an official copy of their course-by-course credit evaluation report sent directly to FRCC. A complete list of approved NACES members can be found at www.naces.org/members.html. FRCC will perform a transfer credit evaluation only after the student has declared a degree program and submitted both a Transfer Credit Evaluation Request form and an official copy of their NACES course-by-course credit evaluation report. Students may also be required to provide English-translated course descriptions for courses that they wish to have transferred.

Transfer Credit Appeals Process

Consistent with the requirements of the Colorado Commission of Higher Education, CCCS Colleges have established a Transfer Appeals Process. Based upon the initial transcript evaluation of transfer credits completed, a student may appeal:

1. A decision regarding the transferability of a specific course(s);
2. A decision regarding the placement of a specific course(s); or
3. The college's failure to provide a transcript evaluation within the designated 30-day calendar period.

Procedures for Transfer Credit Appeal at the College Level:

Appeal and Secondary Decision

1. Students with questions or concerns about their transcript evaluations should contact the Transcript Evaluator who provided the evaluation. If the question or concern cannot be resolved between the student and Transcript Evaluator, the student may formally appeal in writing to the Coordinator of Admissions and Records within 15 calendar days of the date of the evaluation.
2. The decisions regarding course transferability and/or placement made in the initial transcript evaluation will be binding if the student fails to file a written appeal within 15 calendar days.
3. The appointed college official will have 15 calendar days to review the student's appeal and inform the student in writing of the decision on the appeal including the rationale for that decision. In addition, the student shall be informed in writing of the process for appealing this decision.
4. The student is informed by the appointed official of the remaining appeal options. Failure to inform the student will result in the decision being considered null and void. The

student's request will prevail and cannot be overturned by the college.

Appeal beyond Secondary Decision

The secondary decision may be appealed by filing a written appeal with the Chief Academic Officer of the college within 15 calendar days of the postmark date of the letter notifying the student of the appointed official's decision. If the student fails to file an appeal within this time period, the original or initial decision shall be binding.

The college will hear and reach a decision on the appeal within 15 calendar days after the appeal is filed.

The student will be notified in writing by the college of its decision regarding the transfer appeal and the rationale for the decision.

Credit for Prior Learning

Prior Learning is a non-college or experience-based learning that has been attained outside the sponsorship of accredited postsecondary education institutions. Credit for Prior Learning (CPL) includes learning acquired from work and life experiences; community and volunteer extension courses; individual study and reading; civic, community and volunteer work; and participation in informal courses and inservice training sponsored by associations, business, government, and industry. CPL is not awarded for **EXPERIENCE**, but for college-level **LEARNING** which entails knowledge, skills, and competencies that students have obtained as a result of their prior learning experience.

The Colorado Community College System (CCCS) awards credit for prior learning based on board policy 9-42 of the State Board for Community Colleges and Occupational Education.

Credit for prior learning may be awarded by a variety of methods that include:

1. Standardized Tests

- College Level Examination Program (CLEP)
- Excelsior College / Formerly American College Testing Proficiency Program (ACT-PEP/RCE/EXCELSIOR)
- Defense Activity for Nontraditional Educational Support (DANTES)
- Advanced Placement (AP)
- International Baccalaureate (IB)

1. Institutional Challenge Examinations

- Examination equivalent to the comprehensive final exam
- Examination may be written, oral, demonstration or a combination of all three
- Evaluated by an area dean or designated subject expert

1. Published Guides

- American Council on Education (ACE) for military training & experiences
- ACE (non-collegiate) for industrial and corporate training programs
- Other published guides developed by nationally recognized organizations

1. Portfolio Assessment

- Portfolio requirements and assessment determined by college faculty for work or life experiences that meet the following criteria:
 - The learning is demonstrable
 - Include both theoretical and applied components
 - Are at the college level, and
 - Are equivalent to a specific college course or courses in the student's program of study

Note: To facilitate the awarding of credit among the state's community colleges, the Community Colleges of Colorado have established the CCCS Standardized Test Matrix for the Award of Credit. This Matrix is accessible online at www.cccs.edu/wp-content/uploads/2012/08/Credit-for-Prior-Learning-Handbook.pdf. The Credit for Prior Learning form is available in Admissions & Records.

Standards for Awarding Credit for Prior Learning

1. Academic credit will only be awarded for those courses directly applicable to curriculum requirements at FRCC and to the student's declared certificate or degree program listed in the college's catalog.
2. A student may use CPL to fulfill all degree/certificate graduation requirements except for the mandatory 25% residency requirement.
3. If pursuing a transfer degree (A.A., A.S., or A.G.S. Articulated degree program), CPL will only be granted for the purpose of satisfying graduation requirements. These credits might not transfer to colleges outside of CCCS. Contact the college to which you intend to transfer to determine their CPL requirements.
4. All work assessed for CPL must meet or exceed "C" level work. Minimum cut-off scores on standardized tests are also established to meet the "C" grade level.

Policies and Procedures

At least one credit hour must be successfully completed and transcribed on the student's record before any CPL credit is awarded.

For all prior learning methods, the course number, course title, number of semester hours, and grade of "CPL" will be posted on the student transcript.

The maximum CPL credit applicable toward graduation is up to the residency requirement of the college from any combination of all CPL methods.

Awarded credit may be applied to meet Guaranteed Transfer (GT) courses. The use of these credits will result in public four-year institutions' reevaluation of scores received on National Standardized Exams.

If CPL is applied to the AA, AS, or AGS-Articulated degree requirements, transferability and transfer guarantees may be affected. Consult your advisor and the receiving institution for details.

All documentation and files regarding a student's prior learning credit will be maintained by FRCC.

A student wishing to appeal a credit for prior learning decision should follow the transfer credit appeal process outlined in this catalog.

Prior experience shall be evaluated only if requested by the student.

Transferability of Credit for Prior Learning

Students intending to transfer to another community college in the state system may have their prior learning credits transferred to that college as long as the credits are applicable to the student's declared certificate/degree program.

Students intending to transfer to other collegiate institutions not within the state community college system should contact that institution to determine the transferability of credit awarded by prior learning.

Secondary to Post-Secondary Articulation Agreements

FRCC through CCCS has established agreements with local school districts, businesses and Colorado four-year colleges/universities to award college credit for approved and selected courses and programs completed both inside and outside the college.

Instructional Deans may approve, on a case-by-case basis, a Course Equivalency Agreement for credit obtained from institutions or programs not covered by such agreements.

Appeal of Higher Education Policy Issues

In addition to hearing appeals regarding the state guaranteed general education program, a student may appeal directly to CDHE when the issue involves one of the following areas:

- Violation of the Student Bill of Rights (see Student Bill of Rights)
- Noncompliance with CDHE policies pertaining to transfer, student fees, etc.
- Failure of an institution to follow its established policies and procedures
- Failure of an institution to respond to a student's written appeal within 30 days

However, CDHE's appeal process is not designed to resolve disputes between an individual and an institution that involves grades, billing, or terms of employment or that involve athletic eligibility. In addition, institutional tuition classification decisions are not subject to appeal to CDHE after the institutional appeal process has been completed.

Procedures:

To initiate this process with CDHE, a student may appeal by submitting a written request (letter or email) describing the issue(s) and steps the student has taken to resolve the issue. Eligible appeals, as indicated above, will follow the full appeal process. Appeals that involve issues that are reserved for the institution will be referred to the appropriate college authority. For more information regarding Colorado's Student Appeal Process, go to <http://higher.ed.colorado.gov/Academics/Appeals/>.

Course Substitution Appeal

Individual programs may have designated specific courses to meet general education requirements. When not specified

within the specific degree program, students may select courses from the Approved General Education Course List for the A.A.S. Degree. A program advisor must approve any course substitution to the specific program requirements.

Students must meet with faculty advisor and complete the course substitution form. The appeal is reviewed by the Dean of Instruction and the Chief Academic Officer.

STUDENT RESPONSIBILITIES & CODE OF CONDUCT

It is the responsibility of each student at Front Range Community College to be a responsible member of the college community by reading and complying with the published policies, procedures, rules and regulations of the college, as outlined in this Catalog, the Student Handbook, and other official materials, including online publications at www.frontrange.edu. The following are some of the most frequently referenced policies and administrative procedures.

Academic Integrity

Students at Front Range Community College are expected to behave as responsible members of the college community and to be ethical in their academic work. FRCC strives to provide students with the knowledge, skills, judgment and critical thinking necessary to function in society. To falsify or fabricate the results of one's research; to present the words, ideas, data, or work of another as one's own; or to cheat on an examination corrupts the essential process of higher education and is a disservice to the student and to the college community.

Guidelines for academic integrity: Students assume full responsibility for the content and integrity of the coursework they submit. The following guidelines are to assist students in observing academic integrity:

- Students must do their own work and submit only their own work on examinations, reports and projects, unless otherwise permitted by the instructor.
- Students are encouraged to contact their instructor about appropriate citation guidelines.
- Students may benefit from working in groups. However, students must not collaborate or cooperate with others on graded assignments, examinations, or other academic exercises unless clearly directed to do so by the instructor.
- Students must follow all written and/or verbal instructions given by instructors or designated college representatives prior to taking examinations, placement assessments, tests, quizzes and evaluations.
- Students are responsible for adhering to course requirements as specified by the instructor in the course syllabus.

FRCC treats all violations of academic integrity seriously. Faculty, departments, and deans act in partnership to develop appropriate responses to incidents of academic dishonesty. The purpose of this partnership is to serve the best interests of students enrolled at the college.

Violations of academic integrity include but are not limited to: plagiarism, misuse of academic materials, unauthorized collaboration, falsification of information, helping someone else violate reasonable standards for academic behavior, and cheating.

Plagiarism is the adoption or reproduction of ideas, words, or statements of another person as one's own without proper citation or acknowledgment. When a student submits work that they claim to be their original work, but actually is not, the student has committed plagiarism. Plagiarism includes the

following: copying of one person's work by another and claiming it as his or her own; false presentation of one's self as the author or creator of a work; falsely taking credit for another person's unique method of treatment or expression; falsely representing one's self as the source of ideas or expression; or the presentation of someone else's language, ideas, or works without giving that person due credit.

The misuse of academic materials includes, but is not limited to, the following: stealing or destroying library or reference materials or computer programs; stealing or destroying another student's notes or materials, or having such materials in one's possession without the owner's permission; receiving assistance in locating or using sources of information in an assignment when such assistance has been forbidden by the instructor; illegitimate possession, distribution, or use of examinations or answer keys to examinations; unauthorized alteration, forgery, or falsification of academic records; and unauthorized sale or purchase of examinations, answer keys, papers, or assignments.

Cheating includes intentionally using or attempting to use unauthorized materials, information, or study aids in any forms of work submitted for credit or hours; multiple submissions of the same assignment to different classes without prior authorization; altering or interfering with grading; lying to improve a grade; altering graded work; unauthorized removal of tests from classroom or office; forging signatures on academic documents; intentional and unauthorized falsification of any information or citation in academic work; and intentionally or knowingly helping or attempting to help another to violate any part of the code of academic integrity.

If an instructor or faculty member suspects or has accused a student of academic dishonesty (according to but not limited by the definitions above), he or she will inform the student and submit a report and any appropriate documentation to the Dean of Student Services. Individual members of the faculty will determine the appropriate academic consequence in the class, which may extend from a warning up to and including failure of the course. Individual departments may establish by agreement rules requiring specific academic sanctions. As academic misconduct is also a violation of the student conduct code, the Dean of Student Services may determine appropriate institutional consequences up to and including dismissal from the college, following the processes and sanctions outlined in the college's disciplinary procedures. Students have a right to appeal final grades and disciplinary sanctions based on the college's appeals policies. For more information visit www.frontrange.edu/conduct

Alcohol and Drug Use Policy

In compliance with the Drug-Free Schools and Communities Act Amendment, FRCC has strict rules against students or employees using, being under the influence of, manufacturing, distributing, dispensing, possessing, cultivating, purchasing or selling alcohol or illicit drugs on college property or during college activities. Any student or employee convicted of any such drug violation is subject to criminal penalties under local, state, and federal law, as well as disciplinary action by the college.

Although possession and use of marijuana in limited quantities is consistent with the requirements of the Colorado Constitution and is no longer a crime in the State of Colorado, the possession and use of marijuana remains illegal under federal law. Consistent with federal law, including the Controlled Substances Act and the Drug Free Schools and Communities Act, the use and/or possession of marijuana continues to be prohibited while a student is on college owned or college controlled property, and/or any function authorized or supervised by the college and/or in state owned or leased vehicles.

Alcohol and Drug Related Programs on Campus

Each semester, the Student Life offices of Front Range Community College offer information to students, faculty, and staff on the effects of drug and alcohol use. Programs include access to education, training, and treatment resources in the community.

Health Risks of Alcohol and Drug Use

Alcohol

Alcohol goes directly into the bloodstream, physically affecting the whole body. Some illnesses and health problems caused by alcohol include:

- Hangovers. Headaches, nausea, vomiting, aches and pains all result from drinking too much. Drinking to the point of drunkenness makes you sick.
- Weight gain. Alcohol is not water. A beer has about 150 "empty" calories that provide few if any nutrients.
- High blood pressure. Along with being overweight, high blood pressure is associated with many serious health problems.
- Depressed immune system. Impaired immunity makes you more likely to contract viral illnesses such as flu and infections.
- Cancer. 2-4% of all cancer cases are related to alcohol. Upper digestive tract cancers are the most common, hitting the esophagus, mouth, larynx, and pharynx. Women who drink prior to menopause are more likely to develop breast cancer. Your risk of skin cancer doubles if you drink slightly more than "moderate levels". Some studies implicate alcohol in colon, stomach, pancreas and lung cancer.
- Liver disease. Heavy drinking can cause fatty liver, hepatitis, cirrhosis and cancer of the liver. The liver breaks down alcohol at the rate of only one drink per hour.
- Alcohol poisoning. Drinking large amounts can result in alcohol poisoning, which causes unconsciousness and even death. Breathing slows, and the skin becomes cold and may look blue. Don't let a person in this condition "sleep it off". Call 911.
- Heart or respiratory failure. Excessive drinking can have serious results. Heart or respiratory failure often means death.

Other long-term effects of heavy alcohol use include loss of appetite, vitamin deficiencies, stomach ailments, sexual impotence, central nervous system damage, and memory loss.

Drugs

Like many prescription drugs, "recreation" drugs come with potentially harmful side effects that can have serious and long-term effects on your health. High doses of many of the drugs, or impure or more dangerous substitutes for these drugs, can cause immediate life-threatening health problems such as heart attack, respiratory failure, and coma. Combining drugs with each other or with alcohol is especially dangerous.

- Barbiturates and tranquilizers are commonly abused prescription drugs. They can cause hangover-like symptoms, nausea, seizures, and coma. Overdose or mixing these drugs with alcohol can be fatal.
- Cocaine can cause such long-term problems as tremors, seizures, psychosis, and heart or respiratory failure.
- LSD can cause nausea, rapid heart rate, depression, and disorientation. Long-term effects include paranoia and psychosis.
- Marijuana and hashish can cause rapid heart rate and memory impairment soon after use. Long-term effects include cognitive problems, infertility, weakened immune system, and possible lung damage.
- Narcotics such as heroin can bring on respiratory and circulatory depression, dizziness, impotence, constipation, and withdrawal sickness. Overdoses can lead to seizures and death.
- PCP, in addition to triggering unpredictable and violent behavior, can cause dizziness, numbness, high heart rate and blood pressure, convulsions, and in high amounts fatal heart and lung failure or ruptured blood vessels.
- Stimulants such as amphetamines have health effects that include high heart rate and blood pressure, headache, blurred vision, dizziness, impotence, skin disorders, tremors, seizures, and psychosis.
- *Information on Health Risks of Alcohol and Drug Use adapted from the Bowles Center for Alcohol Studies: University of North Carolina Chapel Hill.*

Resources for Students and Employees

Use of drugs and alcohol often come with legal, personal, and academic consequences. If a student or employee has questions about alcohol or drug use and is in need of counseling, treatment, or rehabilitation programs, visit www.frontrange.edu/care or one of these community resources:

<http://drugabuse.com>

Westminster/Denver

www.uch.edu/conditions/addictions

Boulder/Longmont

www.bouldercounty.org/family/addiction/pages/default.aspx

Fort Collins

<http://touchstonehealthpartners.org/>

Animals on Campus

Except for service dogs for people with disabilities or those dogs being trained to work with people with disabilities, animals being used by an instructor for educational purposes, and K-9 police

units, animals are not allowed on campus. At no time should animals be left in vehicles. Animals on campus should be reported to Campus Security and/or the local Animal Control authority.

Attendance

All students enrolled at Front Range Community College are expected to be punctual and to attend class regularly. Students who are not in attendance during the first two scheduled class sessions* may be dropped from the course due to non-attendance. For online students, simply logging into the course does **not** count as attendance unless also participating in an academically-related activity such as submitting an assignment or participating in an online discussion about the course content. Students who are dropped for non-attendance will not be permitted to re-enroll.

*Short-term courses may report non-attendance after the first class period.

College Records

It is the responsibility of each student to:

1. Present a valid picture ID when conducting any service related transactions, including but not limited to financial aid inquiries, registration transactions, transcript releases and requests, cashier transactions, testing services, release of any part of the student record as defined by FERPA, or issuance of a college ID card.
2. Update your record with address, phone number, and other contact information.
3. Submit legal documentation for any name change. This documentation may include a marriage certificate, a divorce decree, valid Colorado Driver's License or a court order.

Report Your Concern

If you or someone you know has a problem with drugs, alcohol, cheating, stealing, sexual harassment, etc., don't worry in silence. Tell someone. You don't have to know all the facts. You don't have to give your name. And you don't have to fear any consequences. We're here to help.

Visit www.frontrange.edu/care for support and guidance today.

Computer Use Procedure and Electronic Communication Policy

All students must have access to a computer with internet connection to fulfill class requirements, conduct research, review college-issued email, and perform other activities associated with being a college student. Each FRCC campus provides computers and internet access for student use during posted hours.

The Computer Use Procedure contains the governing philosophy for regulating faculty, student, and staff use of the System's computing resources. It spells out the general principles regarding appropriate use of equipment, software, networks and data. In addition to this policy all members of the CCCS community are also bound by local, state, and federal laws relating to copyrights, security, and other statutes regarding electronic media. The CCCS has the right to monitor any and all aspects of its computer and telecommunications systems including employee email, voice mail, and file structures on any

CCCS system. CCCS's right to monitor its computer system and telecommunications equipment includes, but is not limited to, monitoring sites users visit on the internet, monitoring chat groups and newsgroups, reviewing material downloaded or uploaded by users, and reviewing email sent and received by users.

Students should be aware that due to the nature of their use, computers in FRCC's computer labs and on FRCC campuses are susceptible to computer viruses, which could be passed to other computers via files saved on flash drives or shared with other users. FRCC is committed to reducing the virus threat to computers in its purview, including providing virus-checking software in the labs, continuous upgrades to this software, and procedures for students on its use. This does not ensure that these computers will always be virus-free; as quickly as upgrades are created to deal with viruses, new viruses are being created. Therefore, FRCC cannot be held liable for any loss that may be caused due to a computer virus. The procedures to check for viruses on student work are available in the computer labs on each campus.

To help ensure the security and operations of FRCC's computer network, the connection of personally owned or non-FRCC computers and peripherals to the FRCC non-student wireless network is restricted. Student wireless networks are accessible on each campus.

To read the Computer Use Procedure and Electronic Communication Policy in full, go to www.cccs.edu/SBCCOE/Policies/SP/PDF/SP3-125c.pdf

P2P file sharing can violate copyright laws

Using P2P file-sharing software that copies and distributes music, videos, software, games, or other copyrighted works without permission of the copyright holder is a violation of U.S. copyright law. If you have P2P file-sharing applications installed on your computer, you may be sharing copyrighted works without even realizing it. Even if you do not intend to engage in illegal activity, installing P2P software on a computer can easily result in you unintentionally sharing files (copyrighted music or even sensitive documents) with other P2P users, and you may then be personally responsible for the legal and financial consequences.

Content owners, such as the recording industry, movie studios, and game and software companies, specifically target unauthorized file sharing on college networks. The Recording Industry Association of America (RIAA) has employed aggressive legal strategies to address unauthorized file sharing. Since September 2003, the RIAA has filed lawsuits against more than 20,000 individuals using P2P software worldwide. Willful copyright infringement can also result in criminal penalties, including imprisonment of up to five years and fines of up to \$250,000 per offense.

You can listen to music and watch entertainment online without running the risks involved with downloading or sharing networks that operate outside copyright law. This link maintains a listing of known sites that provide free and legal entertainment: www.educause.edu/legalcontent.

Summary of Civil and Criminal Penalties for Violation of Federal Copyright Laws

Copyright infringement is the act of exercising, without permission or legal authority, one or more of the exclusive rights granted to the copyright owner under section 106 of the Copyright Act (Title 17 of the United States Code). These rights include the right to reproduce or distribute a copyrighted work. In the file-sharing context, downloading or uploading substantial parts of a copyrighted work without authority constitutes an infringement.

Penalties for copyright infringement include civil and criminal penalties. In general, anyone found liable for civil copyright infringement may be ordered to pay either actual damages or "statutory" damages affixed at not less than \$750 and not more than \$30,000 per work infringed. For "willful" infringement, a court may award up to \$150,000 per work infringed. A court can, in its discretion, also assess costs and attorneys' fees.

For details, see Title 17, United States Code, Sections 504, 505. Willful copyright infringement can also result in criminal penalties, including imprisonment of up to five years and fines of up to \$250,000 per offense.

For more information, please see the web site of the U.S. Copyright Office at www.copyright.gov, especially their FAQ's at www.copyright.gov/help/faq.

Student Email

The Colorado Community College System (System) assigned student email account (@student.cccs.edu) shall be the primary official means of communication with students. The System expects that students sign in and check their college issued email account on a frequent and consistent basis as students are responsible for all information sent to them via their system-assigned email account. This account is free of charge and currently is active for life. The use of student email is a privilege, not a right; and the System maintains the right to limit access. Email is subject to disclosure to third parties through subpoena or other processes.

Acceptable Use

It is acceptable to use the System's student email for purposes relating directly to education. Email should be considered the same as printed communication and should meet the same standards of taste, professionalism, accuracy and legality that are expected in printed communication.

Examples of unacceptable use are listed, but not limited to, below:

- Fraudulent, harassing, threatening or libelous messages and inclusion of personal or sensitive information about individuals without their consent
- Junk mail (e.g. random mail, chain letters, etc.,)
- Distributing unsolicited advertising
- Obscene, profane, abusive, defamatory, derogatory, threatening, or sexually explicit language or graphic representation
- Statements or graphic representations that may be construed as discriminatory or offensive by reference to race, national origin, gender, religion, age, disability, sexual orientation, or other legally protected criteria
- Propagation of computer worms or viruses

- Commercial activities and other activities conducted for personal gain;
- Religious causes
- Solicitations not approved by the System
- Political fundraising or lobbying
- Violating any federal, state, or local law/regulation, or System policy/procedure

Email Harassment

If a student is being harassed via email, the student should immediately notify the Dean of Student Services. It is also the responsibility of all students to report any potential misuse of the college email communications services. Inquiries and concerns can be reported to the Dean of Student Services.

Consequences for Violation

Violations of this policy may result in disciplinary action in accordance with student code of conduct policy and may include any appropriate legal action.

Monitoring

System and network administrators and their authorized employees may monitor the use of email resources to help ensure that uses are secure and in conformity with this policy. Administrators reserve the right to examine, use, and disclose any data found on the system's information networks in order to further the health, safety, discipline, or security of any student or other person, or to protect property.

Student Rights and Freedoms

In addition to rights extended to members of the FRCC student body, individuals also have rights and freedoms under federal, state and local law. Some of those college-related rights and freedoms include:

Freedom of access to the college and to college facilities, services and programs, in accordance with: The Civil Rights Act of 1964; Title IX, Section 504 of the Rehabilitation Act; Americans with Disabilities Act of 1990; Colorado statutes; and college policies and procedures.

Freedom in the classroom, including the right to:

- Ask questions, discuss any views, provided such activity does not infringe on the rights of others.
- Expect professional conduct from faculty.
- Be informed of the academic standards expected in each course.
- Be evaluated solely on the basis of academic performance.
- Privacy in regard to personal or scholastic information.
- Have access to faculty members during their posted office hours.
- Receive reasonable academic assistance from the institution.

Freedom on campus, including the right to:

- Be free from discrimination or harassment on the basis of sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion or sexual orientation.

- Expect an environment free of drug and alcohol abuse.
- Discuss and express in an orderly way any view in support of any cause, while not disrupting college operations or infringing on the rights of others.
- Dress in any way that personal taste dictates and that does not interfere with the educational process or with health and safety requirements.
- Expect that possessions not be opened or searched without consent or unless probable cause exists or under urgent circumstances.
- Be informed of institutional procedures and other expectations.
- Have access to services without unreasonable delays.
- Expect professional conduct from college employees.

Freedom in student affairs, including the right to:

- Have a student government.
- Organize and join campus clubs for educational, political, social, religious or cultural purposes. The function and structure of student clubs is determined by the FRCC club guidelines.
- Use meeting rooms and other campus facilities, as well as bulletin boards, throughout the campus in compliance with college policies and procedures.
- Expect compliance with college contractual agreements.
- Assemble, select speakers and guests, discuss issues of choice, and have the same rights as other citizens to hear differing points of view and to draw conclusions.
- Distribute written materials on campus in a manner consistent with other rights and freedoms, after obtaining the prior approval required of any individual or organization (please contact Student Services).

Freedom in academic affairs, including the right to:

- Serve as members of committees that study such issues as: course scheduling, the instructional calendar, library policy and development, grading systems, course and curriculum development, search committees, and standards and procedures for student discipline.
- Appeal academic decisions regarding completion of program, graduation requirements, academic dismissal from a program, or final grades.

CCCS Common Student Code of Conduct Statements

Conduct that violates student rights and freedoms and is subject to disciplinary action includes, but is not limited to:

1. Academic Misconduct:

Plagiarizing, cheating, or committing any other form of academic misconduct including, but not limited to, unauthorized collaboration, falsification of information, and/or helping someone else violate reasonable standards for academic behavior. Students who engage in any type of academic dishonesty are subject to both academic consequences as determined by the instructor and to disciplinary action as

outlined in the Front Range Community College disciplinary procedures.

2. Disruptive Behavior:

Engaging in any disruptive behavior that negatively affects or impedes teaching or learning (regardless of mode of delivery or class setting); or disrupts the general operation of the college.

3. Deceitful Acts:

Engaging in deceitful acts, including, but not limited to: forgery, falsification, alteration, misrepresentation, non-disclosure, or misuse of documents, records, identification and/or educational materials.

4. Conduct that is Detrimental to College or to Safety:

Conduct that is deemed detrimental, harmful and/or damaging to the college and/or that jeopardizes the safety of others as determined by the Dean of Student Services. Examples include, but are not limited to, slamming doors, throwing chairs, and/or defacing of college property, or property of others.

5. Physical/Non-physical Abuse:

- Physical abuse or conduct that threatens or endangers another person's health or safety.
- Non-physical abuse, threats, intimidation, coercion, influence, or any unwelcome conduct in any form that is sufficiently severe, pervasive or persistent that it alters the conditions of the learning environment or employment.
- Knowingly falsifying, publishing or distributing, in any form, material that tends to impeach the honesty, integrity, virtue or reputation of another person.

1. Harassment and/or Discrimination:

Discrimination or harassment on the basis of sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion or sexual orientation.

2. Sexual Misconduct:

- Sexual Misconduct offenses include, but are not limited to Sexual Harassment, Non-Consensual Sexual Contact (or attempts to commit same), Non-Consensual Sexual Intercourse (or attempts to commit same), and/or Sexual Exploitation
- For more information see SP 4-120a: www.frontrange.edu/About-Us/Legal-Info-Disclaimers/Sexual-Harassment/Policy-Overview.aspx.

1. Weapons:

Possession or distribution of any unauthorized firearms, ammunition, explosives, fireworks and/or other dangerous weapons (or chemicals/ flammable liquids) or use/threat of use of any instrument (including, but not limited to paint ball guns, pellet guns, air soft guns, bow and arrows, knives) as a weapon to intimidate, harass, or cause harm to others.

2. Narcotics/Alcohol:

Use, being under the influence, manufacturing, possession, cultivating, distribution, purchase or sale of alcohol and/or drugs (illegal and/or dangerous or controlled substance) and/or alcohol/drug paraphernalia while on college owned or college

controlled property, and/or at any function authorized or supervised by the college and/or in state owned or leased vehicles.

Note: Although possession and use of marijuana in limited quantities is consistent with the requirements of the Colorado Constitution and is no longer a crime in the State of Colorado, the possession and use of marijuana remains illegal under federal law. Consistent with federal law, including the Controlled Substances Act and the Drug Free Schools and Communities Act, the use and/or possession of marijuana continues to be prohibited while a student is on college owned or college controlled property, and/or any function authorized or supervised by the college and/or in state owned or leased vehicles.

3. **Dress Code:**

Dress or personal hygiene that fails to meet the established safety or health standards of specific classes or activities offered by the college.

4. **Leaving Children Unattended:**

Leaving children unattended or unsupervised in campus buildings or on campus grounds unless enrolled or participating in authorized campus activities.

5. **Violation of Laws, Directives, and Signage:**

- Violating any municipal, county, state or federal law that adversely impacts the conditions of the educational or employment environment.
- Violations of college traffic and parking rules, regulations, or signage.
- Damage to or falsely using fire alarms and/or fire extinguishers.
- Creating an intentional obstruction that unreasonably interferes with freedom of movement, either pedestrian or vehicular. This includes, but is not limited to leading or inciting to disrupt college activities.
- Failure to comply with the lawful directives of College employees acting within the scope of their duties, including those directives issued by a College administrator to ensure the safety and wellbeing of others.
- Violations of college policies, protocols, or procedures or signage.

1. **Illegal Gambling:**

Participation in illegal gambling activities on college owned or college controlled property, and/or any function authorized or supervised by the college and/or in state owned or leased property.

2. **Unauthorized Entry and/or Unauthorized Possession:**

Entry into, or use of any building, room, or other college-owned or college-controlled property, grounds, or activities without authorized approval. This also includes, but is not limited to the unauthorized possession, duplication or use of college keys, lock combinations, access codes, and access cards and/or credentials and/or propping open or tampering with doors/windows..

3. **Unacceptable Use of College Equipment, Network or System:**

Unacceptable uses of any college-owned or operated equipment, network or system including, but not limited to: knowingly spreading computer viruses; reposting personal communications without author's consent; copying protected materials; using the network for financial or personal gain, commercial activity, or illegal activity; accessing the network using another individual's account; unauthorized downloading/uploading software and/or digital video or music; downloading/uploading, viewing or displaying pornographic content, or any other attempt to compromise network integrity.

4. **Unauthorized Pets/Animals:**

Possession of any unauthorized pet or animal, excluding trained service animals (For residential dorms only: and/or assistance animals) while on college-owned or college-controlled property.

5. **Tampering with Student Organization or Election:**

Tampering with the process of any college recognized student organization, election or vote.

6. **Group or Organization Conduct:**

Students who are members of a college recognized student organization or group and commit a violation of Student Code of Conduct may be accountable both as an individual and as a member of the student organization.

7. **Abuse of the Student Disciplinary and/or Grievance Procedure:**

Abuse of the Student Disciplinary and/or Grievance Procedure includes, but is not limited to the following:

- Disruption or interference with the orderly conduct of the student disciplinary / grievance procedure.
- Falsification, distortion, or misrepresentation, or knowingly pursuing malicious, frivolous, or fraudulent charges.
- Attempting to discourage an individual's proper participation in, or use of, the student disciplinary / grievance procedure.
- Attempting to influence the impartiality of a participant and/or the student disciplinary / grievance procedure.
- Harassment (verbal or physical) and/or intimidation of a participant in the student disciplinary / grievance procedure.
- Failure to comply with directives and/or sanctions imposed under student disciplinary / grievance procedure.
- Influencing or attempting to influence another person to commit an abuse of the student disciplinary / grievance procedure.
- Engaging in retaliatory acts in any form against any person or person(s) involved in the student disciplinary / grievance procedure.

1. **Unauthorized Entry into College Events:**

Entering or attempting to enter any college-sponsored activity without proper credentials for admission.

Please note: In most circumstances, college will treat attempts to commit code of conduct violations as if those attempts had been completed.

Violations of the above may result in, but are not limited to, fines, restitution, community service, and/or disciplinary procedures.

The following person has been designated to handle allegations regarding nondiscrimination policies: Paul M. Meese, Executive Director, Organizational Development and Human Resources, 303-678-3707, 2190 Miller Drive, Longmont, CO 80501 or paul.meese@frontrange.edu. Grievance procedures for Title IX, Section 504, and ADA have been established for students and employees who believe that discrimination has occurred.

Disciplinary Procedures

Students are expected to adhere to the Student Code of Conduct and policies and procedures of the college. If a student is charged with violating the Code of Conduct, these are the procedures to be used in resolving the charge.

Definitions

Code of Conduct: A document developed and published by each college which defines prescribed conduct of students.

Student: All persons taking courses at the College(s), both full-time and part-time, pursuing both undergraduate credit and non-credit courses and those concurrently attending secondary or post-secondary institutions and College. Persons who are not officially enrolled for a specific term, but who have a continuing relationship with the college are considered students.

Jurisdiction: College jurisdiction applies to student conduct which occurs on or off campus including while a student or organization is participating in College-sponsored activities such as study abroad and student travel programs. The College may adjudicate off campus conduct when the continued presence of the student is likely to interfere with the educational process or the orderly operation of the campus; is likely to endanger the health, safety or welfare of the College community; or the offense committed by the student is of such a serious nature as to adversely affect the student's suitability as a member of the College community. The Student Code of Conduct shall apply to a student's conduct even if the student withdraws from school while a disciplinary matter is pending. In relevant cases, the student's use of electronic media in violating a standard of conduct may be considered in the adjudication process regardless of where the electronic media originated.

Chief Student Services Officer (CSSO): The individual designated by the college president to administer student affairs and be responsible for administering the college's Student Conduct Code and this procedure. The CSSO may delegate student discipline to another individual (designee) Title IX Coordinator(s) and Title VI and VII Coordinator(s) (EO Coordinator) is the employee(s) designated by the college president to oversee all civil rights complaints.

Notice: Notices which are required to be given by this procedure shall be considered served upon the student when given by personal delivery, mailing by certified mail, or emailing the student to their official college email address requesting a delivery receipt notification. If notice is mailed, student shall be given three (3) additional days to respond.

Day: Refers to working day unless otherwise noted below.

Sanctions: One or more of the following may be imposed when there is a finding that a student has violated the college's Code of Conduct.

1. **Warning:** A Notice served upon the student advising him/her that he/she is violating or has violated college regulations.

2. **Probation:** After a finding of violation of the Code of Conduct, restriction of student's privileges for a designated period of time including the probability of more severe disciplinary sanctions if the student is found to be violating any college regulations during the probationary period.
3. **Other disciplinary sanction:** Fines, restitution, denial of privileges, assignment to perform services for the benefit of the college or community; or other sanction that doesn't result in the student being denied the right of attending classes.
4. **College suspension or expulsion:** An involuntary separation of the student from the College for misconduct not based on academic performance for a specified period of time.
 - Suspension is a separation that shall not exceed three academic terms per suspension for any singular offense or situation. While a student is suspended, he or she is not eligible for admission or re-admission at any of the community colleges within CCCS. Once the suspension is lifted at any of the community colleges within CCCS, the student may be eligible for admission or re-admission. Examples of suspension include, but are not limited to the following: the college, a department or program, a class, residence hall, use of a college facility or an activity. Students may be suspended from one class period by the responsible faculty member or adjunct instructor. Longer suspensions can only be implemented by the CSSO or designee in accordance with this procedure.
 - Expulsion is an indefinite separation from the college. The student is not eligible for admission or re-admission at any of the community colleges within CCCS.
 - In exceptional cases where a student wants to be considered for admission or re-admission after an expulsion has been implemented, the student bears the burden to prove the behavior that resulted in the expulsion has been resolved. It is within the college's discretion to admit or deny the student.
5. **Interim Action:** An immediate action taken by the CSSO to ensure the safety and well-being of members of the college community; preservation of college property; or if the student poses a definite threat of disruption or interference to others or the normal operations of the college. In the event of an interim action, the hearing before the CSSO or designee shall occur as soon as possible following the interim action. If the college issues a permanent sanction, the student shall be afforded appeal rights as discussed below. If the college does not implement a permanent sanction, the interim action will be removed from the student's record.

Procedures

Decision

The CSSO or designee shall receive all allegations of student misconduct, investigate the complaints, which includes meeting with the student to give him/her the opportunity to respond to the allegations of misconduct. If the allegations of misconduct are discrimination and/or harassment based on federal or state civil rights laws, the college will investigate those incidents through the Civil Rights Grievance and Investigation Process, System President's Procedure (SP) 4-31a.

Once the investigation is complete, either through this process or the Civil Rights Grievance and Investigation Process, the CSSO or designee shall render a sanction decision.

The CSSO or designee may decide that the charges can be disposed of administratively by mutual consent of the parties involved on a basis acceptable to them. If an administrative resolution is not achieved, the CSSO or designee shall issue a decision which determines whether the alleged conduct occurred; whether the conduct violated the Code of Conduct or college procedures; and impose a sanction(s) if appropriate.

The student shall receive written notice of the decision and be advised of his/her right to appeal the Decision, subject to the grounds below, by filing a written appeal with the CSSO or designee within seven (7) days of service of the Decision.

Appeal

In the event of an appeal, the CSSO or designee shall give written notice to the other party (e.g., if the accused student appeals, the appeal is shared with the complainant who may also wish to file a response), and then the CSSO or designee will draft a response memorandum (also shared with all parties). All appeals and responses are then forwarded to the appeals officer or committee for initial review to determine if the appeal meets the limited grounds and is timely. The original finding and sanction will stand if the appeal is not timely or substantively eligible, and the decision is final. If the appeal has standing, the documentation is forwarded for consideration. Because the original finding and sanction are presumed to have been decided reasonably and appropriately, the party appealing the decision must specifically cite the error(s) in the original determination on which the appeal is based. The ONLY grounds for appeal are as follows:

1. A material procedural or substantive error occurred that significantly impacted the outcome of the hearing (e.g. substantiated bias, material deviation from established procedures); which must be explained in the written appeal; or
2. To consider new evidence, unavailable during the investigation or hearing that could substantially impact the original finding or sanction. A summary of this new evidence and its potential impact must be included in the written appeal, as well as the reasons the new evidence was not available during the original proceeding.

If the appeals officer or committee determines that a material procedural or substantive error occurred, it may return the complaint to the CSSO or designee with instructions to reconvene to cure the error. In rare cases, where the procedural or substantive error cannot be cured by the CSSO or designee in cases of bias, the appeals officer or committee may order a new hearing be held by a different individual acting in the place of the designated CSSO or designee. The results of a reconvened hearing cannot be appealed. The results of a new hearing can be appealed, once, on the two applicable grounds for appeals.

If the appeals officer or committee determines that new evidence should be considered, it will return the complaint to the CSSO or designee to reconsider in light of the new evidence, only. If the subject matter pertains to discrimination and/or harassment pursuant to SP 4-31a, the appeals officer or committee will return the complaint to the Title IX/EO Coordinator to reconsider in light of the new evidence only. The

reconsideration of the CSSO, designee, or Title IX/EO Coordinator is not appealable.

The procedures governing the hearing of appeals include the following:

- All parties should be timely informed of the status of requests for appeal, the status of the appeal consideration, and the results of the appeal decision
- If the appeals officer or committee determines there is new evidence or error in the original proceeding, every opportunity to return the appeal to the CSSO or designee for reconsideration (remand) should be pursued
- Appeals are not intended to be full rehearings of the complaint (de novo). In most cases, appeals are confined to a review of the written documentation or record of the original hearing, and pertinent documentation regarding the grounds for appeal
- An appeal is not an opportunity for an appeals officer or committee to substitute their judgment for that of the CSSO or designee merely because they disagree with its finding and/or sanctions
- Appeals decisions are to be deferential to the original decision, making changes to the findings only where there is clear error and a compelling justification to do so
- Sanctions imposed are implemented immediately unless the CSSO or designee stays their implementation in extraordinary circumstances, pending the outcome of the appeal
- The appeals officer or committee will render a written decision on the appeal to all parties within seven (7) days from receiving the appeal request. The committee's decision to deny appeal requests is final

Special Discipline Process Provisions

- In the event that the student is under the age of eighteen or incapacitated, he or she may have an advisor present to assist him/her in presenting his/her case.
- Students do not have the right to be represented by an attorney or law student during these proceedings except in the case where civil or criminal actions concerning the student are pending and in that case the attorney's role shall be advisory only.
- The student is responsible for presenting his/her own case and, therefore, advisors are not permitted to speak or to participate directly in any hearing except when the student is under the age of eighteen or incapacitated.
- Student shall have the right to identify documents, witnesses and other material he/she would like the CSSO or designee to review before making a final decision.
- Any hearing held shall be conducted in private unless all parties agree otherwise.
- A record of the hearing should be maintained by the CSSO or designee.
- If student has a disability and would like to request an accommodation to assist him/her through the discipline process they may do so by informing the CSSO or designee.

The CSSO or designee will then work with disability support services to accommodate the request.

- Proceedings under this procedure may be carried out prior to, simultaneously with, or following civil or criminal proceedings off-campus.
- Standard of proof-the college will use the preponderance of evidence standard in the disciplinary proceedings, meaning, the college will determine whether it is more likely than not a conduct code was violated.
- All sanctions imposed by the original decision maker will be in effect during the appeal. A request may be made to the CSSO or designee for special consideration in exigent circumstances, but the presumptive stance of the institution is that the sanctions will stand. Graduation, study abroad, internships/externships/clinical placements, etc. do not in and of themselves constitute exigent circumstances, and students may not be able to participate in those activities during their appeal. In cases where the appeal results in reinstatement to the institution or of privileges, all reasonable attempts will be made to restore the student to their prior status, recognizing that some opportunities lost may be irretrievable in the short term.
- The procedural rights afforded to students above may be waived by the student.
- All timelines may be extended as agreed upon by both parties.

Retaliatory Acts

It is a violation of this procedure to engage in retaliatory acts against any employee or student who reports an incident(s) of code of conduct violations or any employee or student who testifies, assists or participates in the discipline proceeding, investigation or hearing related to such allegation(s) of code of conduct violations.

Revising this Procedure

CCCS reserves the right to change any provision or requirement of this procedure at any time and the change shall become effective immediately.

Student Complaint/Grievance Procedure

This Student Grievance Procedure is intended to allow students an opportunity to present an issue which they feel warrants action, including the right to secure educational benefits and services.

If the basis of the claim is discrimination and/or harassment based on federal or state civil rights laws, the student must file a grievance under the Civil Rights Grievance and Investigation Process (see the Legal Notices section of the catalog). If the accused (respondent) is a student, please refer to SP 4-31a. If the respondent is an FRCC Administrator/Professional Technical employee(s), Faculty or Adjunct Instructor(s), Classified employee(s), hourly employee(s), which would include student hourly and workstudy (FRCC employee(s)), authorized volunteer(s), guest(s) or visitor(s), please refer to SP3-50b.

Definitions

Complainant(s) is a person who is subject to alleged inequity as it applies to Board Policies, System President's Procedures, or

College Procedures. For purposes of this procedure, a complainant is student who was enrolled at the time of the alleged incident.

Respondent(s) is a person whose alleged conduct is the subject of a complaint. For purposes of this procedure, a respondent can be an FRCC employee(s), student(s) who was enrolled at the time of the alleged incident, authorized volunteer(s), guest(s), visitor(s), or college.

Grievance: A grievable offense is any alleged action which violates or inequitably applies State Board Policies, System President's Procedures, and College Procedures. The complainant must be personally affected by such violation or inequitable action.

Non-grievable matters : The following matters are not grievable under this procedure except as noted: matters over which the college is without authority to act; grades and other academic decisions unless there is an allegation that the decision was motivated by discrimination and/or harassment which should be filed under the appropriate Civil Rights Grievance and Investigation Process.

Chief Student Services Officer (CSSO) : The college employee designated by the college president to administer student grievances. The CSSO may delegate the responsibility over student grievances to another person.

Notice: Notices which are required to be given by this procedure shall be considered served upon the student when given by personal delivery, mailing by certified mail, or emailing the student to their official college email address requesting a delivery receipt notification. If notice is mailed, student shall be given three (3) additional days to respond.

Day: Refers to calendar day unless otherwise noted below.

Remedy: The relief that the Grievant is requesting.

Filing a Complaint

All complaints shall be made as promptly as possible after the occurrence. A delay in reporting may be reasonable under some circumstances; however, an unreasonable delay in reporting is an appropriate consideration in evaluating the merits of a complaint or report. To file a complaint or grievance, click here.

Procedures

Students must timely submit all grievances in writing to the CSSO. The grievance should clearly and concisely describe the alleged incident(s), when and where it occurred, and the desired remedy sought. The grievance should be signed by the initiator or, in the case of an email submission, sent as an email attachment, in letter format and should contain the name and all contact information for the grievant. Any supporting documentation and evidence should be referenced within the body of the formal grievance. Additionally, the initiator of a formal grievance should submit any supporting materials in writing as quickly as is practicable. The complainant's supporting documentation should clearly demonstrate all informal efforts, if any, to resolve the issue(s) with the person involved and the person's supervisor. This includes names, dates and times of attempted or actual contact along with a description of the discussion and the manner of communication made in the course of each effort. If contacting the person involved and/or the supervisor is impracticable, the complainant should state the

reasons why. The FRCC community benefits from informal and formal procedures that encourage prompt resolution of complaints and concerns students may have about the implementation of policies and procedures that govern the institution.

Informal Grievance Process

Complainant is encouraged to resolve the issue with the Respondent through the informal process. The CSSO shall facilitate the informal process. If the informal grievance process is unsuccessful, or if FRCC or the complainant chooses not to pursue the informal process, the CSSO will open a formal grievance case.

Formal Grievance Process

Complainant must timely file a written statement of the actions complained of and describes the remedy, she/he is seeking with the CSSO. A matter could also be referred to this process by the College President or his/her designee. Once a written grievance is filed or referred, the CSSO or designee will determine whether or not the situation states a grievable offense. The matter will be closed if the situation is determined not grievable and the Complainant will be notified of the reasons.

If the matter is determined to be grievable, the CSSO will request a meeting (hearing) with both the complainant and respondent. Both parties will be given the opportunity to discuss the allegations of the grievance and may offer any documentation, witnesses, or other materials in support of the complaint.

During this hearing, neither party may have a representative, including attorneys or law students (legal counsel). The only exception to this rule is if there is a civil or criminal action(s) pending specifically related to this grievance, both parties may be represented by legal counsel during these proceedings. Under those limited exceptions, the legal counsel's role shall be advisory only. The party represented by legal counsel must notify the CSSO forty-eight (48) hours in advance of any scheduled meeting so that the CSSO can notify the other party. These procedures are entirely administrative in nature and are not considered legal proceedings.

No audio or video recording of any kind other than as required by institutional procedure is permitted.

The CSSO may also contact or request a meeting with relevant college staff, students, or others as part of the investigation.

At the CSSO's discretion, the CSSO may discontinue meetings with anyone that is causing a disruption to the process or is being uncooperative, and will proceed to make a determination based on the information known at that time. Based on the preponderance of evidence, the CSSO shall issue a decision, in writing, to both the complainant and respondent. The decision shall reject or grant the grievance and make recommendation(s) to resolve the issue(s). The complainant and respondent shall be advised of his/her right to appeal the decision, subject to the grounds below, by filing a written appeal with the CSSO within seven (7) days of service of the Decision.

In the event of an appeal, the CSSO shall give written notice to the other party to allow him/her the opportunity to submit a response in writing. The CSSO will also draft a response memorandum (also shared with all parties). All appeals and responses are then forwarded to the appeals officer or

committee for initial review to determine if the appeal meets the limited grounds and is timely. The original finding will stand if the appeal is not timely or substantively eligible, and the decision is final. If the appeal has standing, the documentation is forwarded for consideration. The party requesting appeal must show error as the original finding is presumed to have been decided reasonably and appropriately. The ONLY grounds for appeal are as follows:

1. A procedural or substantive error occurred that significantly impacted the outcome of the hearing (e.g. substantiated bias, material deviation from established procedures); or
2. To consider new evidence, unavailable during the original hearing or investigation, that could substantially impact the original finding. A summary of the new evidence and its potential impact must be included in the written appeal.

If the appeals officer or committee determines that new evidence should be considered, it will return the complaint to the CSSO to reconsider in light of the new evidence, only. If the appeals officer or committee determines that a material procedural or substantive error occurred, it may return the complaint to the CSSO with instructions to reconvene the hearing to cure the error. In rare cases, where the procedural or substantive error cannot be cured by the CSSO in cases of bias, the appeals officer or committee may order a new hearing be held by a different individual acting in the place of the designated CSSO. The results of a reconvened hearing cannot be appealed. The results of a new hearing can be appealed, once, on the two applicable grounds for appeals.

Special Grievance Process Provisions

- In the event that the student is under the age of eighteen or incapacitated, he/she may have an advisor present to assist him/her in presenting his/her case.
- The Parties do not have the right to be represented by legal counsel during these proceedings except in the case where civil or criminal actions concerning the grievance are pending and in that case the legal counsel's role shall be advisory only. The party represented by legal counsel must notify the CSSO forty-eight (48) hours in advance of any scheduled meeting so that the CSSO can notify the other party.
- The student is responsible for presenting his/her own case and, therefore, advisors are not permitted to speak or to participate directly in any hearing except when the student is under the age of eighteen or incapacitated.
- Student shall have the right to identify documents, witnesses and other material he/she would like the CSSO to review before making a final decision.
- Any hearing held shall be conducted in private unless all parties agree otherwise.
- A record of the hearing should be maintained by the CSSO.
- If student has a disability and would like to request an accommodation to assist him/her through the grievance process they may do so by informing the CSSO. The CSSO will then work with disability support services to accommodate the request.

- If the grievance is against the CSSO, the Chief Academic Officer or other person designated by the president shall perform the duties of the CSSO.
- Jurisdiction-college grievance proceedings may be instituted over incidences that occur or are related to college or college-sanctioned activities or was of such a nature to impact upon the college.
- Proceedings under this procedure may be carried out prior to, simultaneously with, or following civil or criminal proceedings off-campus.
- Standard of proof-the college will use the preponderance of evidence standard in the grievance proceedings, meaning, the college will determine whether it is more likely than not the complainant was subjected to inequity as it applies to Board Policies, System President's Procedures, or College procedures.
- False Reports-college will not tolerate intentional false reporting of incidents. False reporting could lead to disciplinary action, up to and including termination for employees, and expulsion for students

For FRCC employees, false reports will be considered a violation of BP 3-70, Code of Ethics.

For students, false reports will be considered a violation of the college student code of conduct.

- The procedural rights afforded to students above may be waived by the student.

Retaliatory Acts

If a person who files a grievance, or any person who testifies, assists or participates in a proceeding, investigation or hearing relating to such grievance, feels they are being subjected to retaliatory acts may report such incidences to the CSSO. It is a violation of the grievance procedure to engage in retaliatory acts against any person who files a grievance or any person who testifies, assists or participates in the grievance proceeding, investigation or hearing relating to such grievance. Such act will be subject to discipline, up to and including expulsion for students, termination for CCCS employees, and dismissal for authorized volunteers, guests or visitors.

Revising this Procedure

CCCS reserves the right to change any provision or requirement of this procedure at any time and the change shall become effective immediately.

If you believe that you have been subjected to alleged inequity as it applies to Board Policies, System President's Procedures, or College Procedures, you are required to fill out an incident report form. The College can only base its findings and take actions based on the information provided by you. Incident report forms are available in the office of the Dean of Student Services. [Click here for the online civil rights grievance form.](#)

ASSOCIATE DEGREES

Most associate degree programs may be completed in four semesters, if the student is attending on a full-time basis, successfully completing the required number of hours, following the specific educational plan provided by an advisor and is not required to complete developmental-level courses. A student may choose to extend the amount of time spent completing the degree.

FRCC Guaranteed Completion of A.A. / A.S. in Two Years

The Colorado Community College System (CCCS) colleges have adopted a set of guidelines to define the conditions for students who expect to graduate with an Associate of Science or Associate of Arts Degree in two calendar years. The Academic Advising Center at each individual CCCS community college can provide additional information.

The Colorado Community College System colleges guarantee that a student will be able to complete all course work necessary to earn an A.A. or A.S. degree from a specific CCCS college in 60 credit hours and in 24 months.

Students must satisfy all the conditions below to be eligible for this guarantee:

1. Enroll at the same community college for at least four consecutive semesters, excluding summer.
2. Register within one week of the beginning of registration for each semester.
3. Have completed all required developmental coursework before beginning the count of two years to degree completion.
4. Enroll in and pass ("C" or better) an average of 15 credit hours of coursework that applies to the A.A. /A.S. in each of four consecutive semesters.
5. Obtain a recommended plan of study for the A.A. or A.S. degree, signed by the student and community college advisor, prior to registration for the second semester and according to the requirements of the degree.
6. Follow the signed plan of study.
7. Continue with the same degree (A.A. or A.S.) from entrance to graduation.
8. Retain documentation demonstrating that all the above requirements were satisfied (transcripts, advising records, etc.).

COLORADO GUARANTEED TRANSFER PROGRAM FOR GENERAL EDUCATION

Field Code:

Campus:

The Colorado Department of Higher Education, in consultation with Colorado's public colleges and universities, has developed a standardized concept of general education and has identified the specific courses to satisfy these general education requirements. The curriculum consists of 31 credit hours of courses across

these specific content areas: communication, mathematics, humanities, natural sciences, and social sciences. Receiving institutions shall apply the 31 credit hours of guaranteed general education courses to a student's general education or major requirements.

GUARANTEED GENERAL EDUCATION COURSES

Arts and Humanities • Arts GT Courses - AH1

GT-AH1 Courses

ART 110	Art Appreciation	3
ART 111	Art History Ancient to Medieval	3
ART 112	Art History Renaissance to Modern	3
ART 207	Art History - 1900 to Present	3
DAN 125	History of Dance I	3
MUS 120	Music Appreciation	3
MUS 121	Music History Medieval to Classical	3
MUS 122	Music History Romantic to Present	3
MUS 123	Survey of World Music	3
MUS 125	History of Jazz Music	3
THE 105	Theatre Appreciation	3
THE 108	Theatre Script Analysis	3
THE 211	Development of Theatre: Greek-Renaissance	3
THE 212	Development of Theatre: Restoration-Modern	3
THE 215	Playwriting	3

Literature and Humanities • GT Courses - AH2

GT-AH2 Courses

HUM 103	Introduction to Film Art	3
HUM 115	World Mythology	3
HUM 121	Early Civilizations	3
HUM 122	From the Medieval to the Modern	3
HUM 123	The Modern World	3
LIT 115	Introduction to Literature I	3
LIT 201	World Literature to 1600	3
LIT 202	World Literature After 1600	3
LIT 205	Ethnic Literature	3
LIT 211	American Literature to the Civil War	3
LIT 212	American Literature After the Civil War	3
LIT 221	British Literature to 1770	3
LIT 222	British Literature Since 1770	3
LIT 225	Introduction to Shakespeare	3
LIT 246	Literature of Women	3
LIT 259	Survey of African American Literature	3
LIT 268	Celtic Literature	3

Ways of Thinking • GT Courses - AH3

GT-AH3 Courses

PHI 111	Introduction to Philosophy	3
PHI 112	Ethics	3
PHI 113	Logic	3
PHI 114	Comparative Religions	3
PHI 115	World Religions - West	3
PHI 116	World Religions - East	3
PHI 205	Business Ethics	3
PHI 214	Philosophy of Religion	3

PHI 218	Environmental Ethics	3
PHI 220	Philosophy of Death and Dying	3

Foreign Language • GT Courses - AH4

GT-AH4 Courses

FRE 211	French Language III	3
FRE 212	French Language IV	3
GER 211	German Language III	3
GER 212	German Language IV	3
ITA 211	Italian Language III	3
ITA 212	Italian Language IV	3
JPN 211	Japanese Language III	3
JPN 212	Japanese Language IV	3
RUS 211	Russian Language III	3
RUS 212	Russian Language IV	3
SPA 211	Spanish Language III	3
SPA 212	Spanish Language IV	3

Communications • GT Courses - CO2

GT-CO2 Courses

ENG 122	English Composition II	3
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Communications • GT Courses - CO1

GT-CO1 Courses

ENG 121	English Composition I	3
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Communications • GT Courses - CO3

GT-CO3 Courses

ENG 201	Writing for Public Discourse	3
HIS 265	Writing About History	3

History • GT Courses - HI

GT-HI1 Courses

HIS 101	Western Civilization: Antiquity-1650	3
HIS 102	Western Civilization: 1650-Present	3
HIS 111	The World: Antiquity-1500	3
HIS 112	The World: 1500-Present	3
HIS 121	U.S. History to Reconstruction	3
HIS 122	U.S. History Since the Civil War	3
HIS 203	Civil War Era in American History	3
HIS 205	Women in the World	3
HIS 207	American Environmental History	3
HIS 208	American Indian History	3
HIS 215	Women in U.S. History	3
HIS 218	History of Science and Technology	3
HIS 225	Colorado History	3
HIS 235	History of the American West	3
HIS 236	U.S. History Since 1945	3
HIS 243	History of Modern China	3
HIS 244	History of Latin America	3
HIS 245	U.S. in the World	3
HIS 246	History of Mexico	3
HIS 247	20th Century World History	3
HIS 249	History of Islamic Civilization	3
HIS 250	African American History	3
HIS 251	The History of Christianity in the World	3
HIS 255	The Middle Ages	3
HIS 259	Modern Middle East	3
HIS 260	U.S. Foreign Relations History	3

Mathematics • GT - MA

GT-MA1 Courses

MAT 120	Mathematics for the Liberal Arts	4
MAT 121	College Algebra	4
MAT 122	College Trigonometry	3
MAT 123	Finite Mathematics	4
MAT 125	Survey of Calculus	4
MAT 135	Introduction to Statistics	3
MAT 166	Pre-Calculus	5
MAT 201	Calculus I	5
MAT 202	Calculus II	5
MAT 203	Calculus III	4
MAT 204	Calculus III with Engineering Applications	5
MAT 215	Discrete Mathematics	4
MAT 261	Differential Equations with Engineering Applications	4
MAT 265	Differential Equations	3

Natural and Physical Sciences • GT Courses - SC1

GT-SC1 Courses

AGY 240	Introductory Soil Science, with Lab	4
ANT 111	Biological Anthropology with Laboratory	4
AST 101	Astronomy I	4
AST 102	Astronomy II with Lab	4
BIO 104	Biology: A Human Approach	4
BIO 105	Science of Biology with Lab	4
BIO 111	General College Biology I with Lab	5
BIO 112	General College Biology II with Lab	5
BIO 201	Human Anatomy and Physiology I with Lab	4
BIO 202	Human Anatomy and Physiology II with Lab	4
BIO 204	Microbiology with Lab	4
BIO 208	General College Microbiology with Lab	5
BIO 220	General Zoology with Lab	5
BIO 221	Botany with Lab	5
BIO 224	Genetics	5
CHE 101	Introduction to Chemistry I with Lab	5
CHE 102	Introduction to Chemistry II with Lab	5
CHE 105	Chemistry in Context with Lab	5
CHE 111	General College Chemistry I with Lab	5
CHE 112	General College Chemistry II with Lab	5
ENV 101	Introduction to Environmental Science	4
GEO 111	Physical Geography-Landforms	4
GEO 112	Physical Geography-Weather and Climate	4
GEY 111	Physical Geology	4
GEY 112	Historical Geology	4
GEY 135	Environmental Geology	4
MET 150	General Meteorology	4
NRE 251	General Oceanography with Lab	4
PHY 105	Conceptual Physics with Lab	4
PHY 107	Energy Science and Technology with Lab	4
PHY 111	Physics: Algebra-Based I with Lab	5
PHY 112	Physics: Algebra-Based II with Lab	5

PHY 211	Physics: Calculus-Based I with Lab	5
PHY 212	Physics: Calculus-Based II with Lab	5
SCI 155	Integrated Science I with Lab	4
SCI 156	Integrated Science II with Lab	4

SCI 155 & SCI 156 are intended for Early Childhood Education & Elementary Education Students **ONLY**. Students **MUST** pass BOTH SCI 155 & SCI 156 with a C or higher to satisfy the gtPathways science requirement. Students looking to take these courses should do so understanding that these courses are only guaranteed transferable for students following the subsequent agreements: Early Childhood Teacher Education or Elementary Teacher Education and should seek advisement from the four-year college/university and Front Range Community College advisors before enrolling.

Natural and Physical Sciences • GT Courses - SC2

GT-SC2 Courses

(Lecture Course Without Required Laboratory)

AST 150
AST 160
BIO 103
BIO 116
ENV 110
GEY 108
SCI 105

Social and Behavioral Sciences Economics and Political Systems**• GT Courses - SS1**

GT-SS1 Courses

AGE 102	Agriculture Economics	3
ECO 101	Economics of Social Issues	3
ECO 201	Principles of Macroeconomics	3
ECO 202	Principles of Microeconomics	3
ECO 211	Gender in the Economy	3
ECO 245	Issues in Environmental Economics	3
POS 105	Introduction to Political Science	3
POS 111	American Government	3
POS 125	American State and Local Government	3
POS 205	International Relations	3
POS 215	Current Political Issues	3
POS 225	Comparative Government	3

Geography • GT Courses -SS2

GT-SS2 Courses

GEO 105	World Regional Geography	3
GEO 106	Human Geography	3

Human Behavior, Culture or Social Frameworks • GT Courses - SS3

GT-SS3 Courses

AGR 260	World Interdependence: Population and Food	3
ANT 101	Cultural Anthropology	3
ANT 102	Cultural Anthropology Lab	1
ANT 103	Archaeology Laboratory	1
ANT 104	Physical Anthropology Laboratory	1
ANT 107	Introduction to Archaeology	3
ANT 108	Archaeology of World Rock Art	3
ANT 201	Introduction to Forensic Anthropology	3
ANT 215	Indians of North America	3
ANT 250	Medical Anthropology	3

COM 220	Intercultural Communication	3
CRJ 110	Intro to Criminal Justice	3
ETH 200	Introduction to Ethnic Studies	3
JOU 105	Introduction to Mass Media	3
PSY 101	General Psychology I	3
PSY 102	General Psychology II	3
PSY 205	Psychology of Gender	3
PSY 217	Human Sexuality	3
PSY 226	Social Psychology	3
PSY 227	Psychology of Death and Dying	3
PSY 235	Human Growth and Development	3
PSY 238	Child Development	3
PSY 240	Health Psychology	3
PSY 249	Abnormal Psychology	3
PSY 265	Psychology of Personality	3
SOC 101	Introduction to Sociology I	3
SOC 102	Introduction to Sociology II	3
SOC 205	Sociology of Family Dynamics	3
SOC 207	Environmental Sociology	3
SOC 215	Contemporary Social Problems	3
SOC 216	Sociology of Gender	3
SOC 218	Sociology of Diversity	3
SOC 220	Sociology of Religion	3
SOC 231	Sociology of Deviant Behavior	3
SOC 237	Sociology of Death and Dying	3
WST 200	Introduction to Women's Studies	3
WST 225	Women and Social Change	3
WST 240	Goddesses and Women in the Ancient World	3
WST 249	Women's Sexuality	3

The State Guaranteed General Education content areas are identified by the following designations:

GT – Guaranteed Transfer Course Disciplines:**AH - Arts and Humanities (6 credit hours)**

AH1 – Arts and Expression
AH2 – Literature and Humanities
AH3 – Ways of Thinking
AH4 – Foreign Languages

CO - Communication (6 credit hours in either CO1 & CO2 or CO2 & CO3)

CO1-Introductory Writing
CO2-Intermediate Writing
CO3-Advanced Writing

HI - History (3 credit hours)

HI1-History

MA - Mathematics (3 credit hours)**SC - Natural and Physical Sciences (7 credit hours, one course must be SC1)**

SC1 – Science with Laboratory
SC2 – Science without Laboratory

SS - Social and Behavioral Sciences (3 credit hours)

SS1 – Economic or Political Systems

SS2 – Geography

SS3 – Human Behavior, Culture or Social Frameworks

Additional 3 credit hours must be from any Arts & Humanities, History, or Social & Behavioral Sciences

Note: These courses may be completed at any Colorado public higher education institution. Completion of the course requirements by credit for prior learning or transfer from any other institution may meet FRCC degree requirements but may invalidate the guaranteed transfer of A.A. /A.S. Degrees.

Associate Degrees with Designations

The following degrees offered at FRCC provide transfer pathways to Colorado state four-year colleges and universities in specified liberal arts and science designations. It is recommended that you check with the four-year school to which you are planning to transfer after completing an Associate degree regarding the applicable pathway for the academic program you plan to matriculate into. These degrees with designation replace all previously existing statewide transfer agreements for these programs of study.

Anthropology - Associate of Arts

Art History - Associate of Arts

Business - Associate of Arts

Biology - Associate of Science

Chemistry - Associate of Science

Communication - Associate of Arts

Criminal Justice - Associate of Arts

Economics - Associate of Arts

English - Associate of Arts

French - Associate of Arts

Geography - Associate of Arts

Geology - Associate of Science

History - Associate of Arts

Mathematics - Associate of Science

Music - Associate of Arts

Philosophy - Associate of Arts

Political Science - Associate of Arts

Psychology - Associate of Arts

Psychology - Associate of Science

Physics - Associate of Science

Sociology - Associate of Arts

Spanish - Associate of Arts

Studio Art - Associate of Arts

Theater - Associate of Arts

The following articulation agreements are offered:

Early Childhood Teacher Education

Elementary Teacher Education

Pre-Engineering

All degrees with designation and other transfer agreements may be found at

<http://highered.colorado.gov/Academics/Transfers/Students.html>. For information regarding course requirements, please visit our website www.frontrange.edu/transfer.

ASSOCIATE OF ARTS DEGREE

Field Code:

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This is a transfer degree designed for students who plan to major in subject areas such as: anthropology, art, criminal justice, English, ethnic studies, foreign language, geography, humanities, journalism, literature, music, philosophy, political science, sociology, social work, speech, theatre, and women's studies.

The community colleges in Colorado are approved to offer one general Associate of Arts Degree with a generic major of liberal arts, as well as specialized Associates of Arts Degrees in five areas of designation: Business, Economics, History, Psychology, and Spanish. While a student may tailor the generic Associate of Arts Degree to prepare for specific transfer options, all official documents and diplomas issued by the college will only indicate the awarding of an Associate of Arts Degree without any indication of a more specific area of study unless the student completes the requirements for one of the areas of designation noted above.

For more information go to <http://www.frontrange.edu/AA-Degree/>

For an Approved List of Electives, go to:

<http://www.frontrange.edu/docs/default-source/graduation-beyond/approved-list-of-general-electives.pdf?sfvrsn=8>

DEGREE REQUIREMENTS

Required General Education Courses

Written Communication

Choose one pair of courses:

ENG 121: English Composition I **and** ENG 122: English Composition II

ENG 122: English Composition II **and** ENG 201: Writing for Public Discourse

ENG 122: English Composition II **and** HIS 265: Writing About History

Subtotal: 6

Oral Communication

Choose one course:

COM 115: Public Speaking

COM 125: Interpersonal Communication

COM 220: Intercultural Communications

Note: Completing COM courses is a Colorado Community College System requirement; not a gtPathways requirement.

Subtotal: 3

Mathematics

Take one course. Credits over 3 will be applied to electives.

See Math courses

Subtotal: 3

Natural and Physical Sciences

Select two courses, including at least one lab course (GT-SC1, GT-SC2). Extra credits will be applied to electives.

See Natural & Physical Science courses

Subtotal: 7

Arts and Humanities

Take any two courses from two different categories below.

Arts (GT-AH1)

Literature & Humanities (GT-AH2)

Ways of Thinking (GT-AH3)

Foreign Languages (GT-AH4)

Subtotal: 6

History

Take one course:

See History courses

Subtotal: 3

Social and Behavioral Sciences

Take any two courses from two different categories below:

Economics & Political Systems (GT-SS1)

Geography (GT-SS2)

Human Behavior, Culture or Social Frameworks (GT-SS3)

Subtotal: 6

Student Choice

Select one additional course of your choice from these categories:

Arts & Humanities (GT-AH1, AH2, AH3 or AH4)

History (GT-HI1)

Social & Behavioral Sciences (GT-SS1, SS2 or SS3)

Subtotal: 3

Electives

Select 23 credits from the approved list of electives or log into eWOLF to see elective requirements in DegreeCheck.

Selection of elective credits should be done with an advisor and your intended transfer institution.

Subtotal: 23

Additional Graduation Requirements

- No developmental courses may be applied to this degree.
- No more than 6 semester credits independent study or internships may be applied to this degree.
- Students must have a minimum cumulative GPA of 2.0 to be eligible to graduate.
- Transfer Students must complete 15 semester credit hours that are part of their degree requirements at Front Range in order to earn a degree from Front Range.

- Submit graduation application, transfer credits, and credit for prior learning to Admissions & Records by published deadline.
- Continuing students who have not had a 12 month lapse in enrollment will be allowed to use the requirements listed in any catalog published while continuously attending.

Total Credit Hours: 60

ASSOCIATE OF SCIENCE DEGREE

Field Code:

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This is a transfer degree designed for students who plan to major in subject areas such as: astronomy, biology, chemistry, computer science, geology, meteorology, and physics.

The community colleges in Colorado are approved to offer one general Associate of Science Degree. This degree has a generic major of liberal arts. Two A.S. degrees with designations are approved in Mathematics and Psychology.

For more information go to <http://www.frontrange.edu/AS-Degree/>

For an Approved List of Electives, go to: <http://www.frontrange.edu/docs/default-source/graduation-beyond/approved-list-of-general-electives.pdf?sfvrsn=8>

DEGREE REQUIREMENTS

Required General Education Courses

Written Communication

Choose one pair of courses:

ENG 121: English Composition I **and** ENG 122: English Composition II

ENG 122: English Composition II **and** ENG 201: Writing for Public Discourse

ENG 122: English Composition II **and** HIS 265: Writing About History

Subtotal: 6

Oral Communication

Choose one course:

COM 115: Public Speaking

COM 125: Interpersonal Communication

COM 220: Intercultural Communications

Note: Completing COM courses is a Colorado Community College System requirement; not a gtPathways requirement.

Subtotal: 3

Mathematics

Take one course. Credits over 3 will be applied to electives.

MAT 121: College Algebra

MAT 122: College Trigonometry

MAT 166: Pre-Calculus

MAT 201: Calculus I

MAT 202: Calculus II

MAT 203: Calculus III

MAT 204: Calculus III with Engineering Applications

MAT 265: Differential Equations

Subtotal: 3

Natural and Physical Sciences

Take one pair of lab courses:

AST 101: Astronomy 1 **and** AST 102: Astronomy II

BIO 111: General College Biology I with Lab **and** BIO 112: General College Biology II with Lab

BIO 201: Human Anatomy and Physiology I with Lab **and** BIO 202: Human Anatomy and Physiology II with Lab

CHE 111: General College Chemistry I with Lab **and** CHE 112: General College Chemistry II with Lab

GEO 111: Physical Geography-Landforms **and** GEO 112: Physical Geography-Weather and Climate

GEY 111: Physical Geology **and** GEY 112: Historical Geology

PHY 111: Physics: Algebra-Based I with Lab **and** PHY 112: Physics: Algebra-Based II with Lab

PHY 211: Physics: Calculus-Based I with Lab **and** PHY 212: Physics: Calculus-Based II with Lab

Take an additional lab course. Extra credits will be applied to electives.

See Natural & Physical Science courses

Subtotal: 12

Arts and Humanities

Take any two courses from two different categories below.

Arts (GT-AH1)

Literature & Humanities (GT-AH2)

Ways of Thinking (GT-AH3)

Foreign Languages (GT-AH4)

Subtotal: 6

History

Take one course:

See History courses

Subtotal: 3

Social and Behavioral Sciences

Take any two courses from two different categories below:

Economics & Political Systems (GT-SS1)

Geography (GT-SS2)

Human Behavior, Culture or Social Frameworks (GT-SS3)

Subtotal: 6

Electives

Select 18 credits from the approved list of math and science electives and 3 credits from the approved general electives list.

Log into eWOLF to see elective requirements in DegreeCheck.

Selection of elective credits should be done with an advisor and your intended transfer institution.

Subtotal: 21

Additional Graduation Requirements

- No developmental courses may be applied to this degree.
- No more than 6 semester credits independent study or internships may be applied to this degree.
- Students must have a minimum cumulative GPA of 2.0 to be eligible to graduate.
- Transfer Students must complete 15 semester credit hours that are part of their degree requirements at Front Range in order to earn a degree from Front Range.
- Submit graduation application, transfer credits, and credit for prior learning to Admissions & Records by published deadline.
- Continuing students who have not had a 12 month lapse in enrollment will be allowed to use the requirements listed in any catalog published while continuously attending.

Total Credit Hours: 60

ASSOCIATE OF GENERAL STUDIES DEGREE

Field Code:

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This degree is designed for students who want to complete a broad program of both career and transfer courses without specialization. Transferability of the Associate of General Studies Degree depends on the courses taken and the requirements of the receiving institution.

For more information go to <http://www.frontrange.edu/AGS-Degree/>

DEGREE REQUIREMENTS

Required General Education Courses

Communication

Choose one course:

ENG 121 or above

Any COM course

Subtotal: 3

Mathematics

Take one course. Credits over 3 will be applied to electives.

MAT 107 or above

Subtotal: 3

Arts and Humanities

Take one course:

Any ARA course

Any ART course

ASL 121: American Sign Language I

ASL 122: American Sign Language II

ASL 123: American Sign Language III

ASL 221: American Sign Language IV

ASL 222: American Sign Language V

Any CHI course

DAN 125: History of Dance I

Any FRE course

Any GER course

Any HUM course

Any ITA course

Any JPN course

Any LIT course

Any MUS course

Any PHI course

Any RUS course

Any SPA course

Any THE course

Any WST course (A WST course may fulfill this requirement **OR** Social & Behavioral Sciences, but not both.)

Subtotal: 3

Natural and Physical Sciences

Take one course. Credits over 3 will be applied to electives.

Any AST course

Any BIO course

Any CHE course

ENV 101: Introduction to Environmental Science

GEO 111: Physical Geography-Landforms (May fulfill this requirement **OR** Social & Behavioral Sciences, but not both.)

GEO 112: Physical Geography-Weather and Climate (May fulfill this requirement **OR** Social & Behavioral Sciences, but not both.)

Any GEY course

Any MET course

Any PHY course

Any SCI course

Subtotal: 3

Social and Behavioral Sciences

Take one course:

Any ANT course

COM 220: Intercultural Communication (May fulfill this requirement **OR** Communication, but not both.)

Any ECO course

Any ETH course

Any GEO course

Any HIS course

Any POS course

Any PSY course

Any SOC course

Any WST course (A WST course may fulfill this requirement **OR** Social & Behavioral Sciences, but not both.)

Subtotal: 3

Electives

Select 15 credits from the approved list of electives and any combination of 30 credits from general education courses and/or career-technical courses.

Log into eWOLF to see elective requirements in DegreeCheck.

Selection of elective credits should be done with an advisor and your intended transfer institution.

Subtotal: 45

Additional Graduation Requirements

- A minimum of 15 credits must be completed from approved gtPathways (Guaranteed Transfer) coursework.
- No developmental courses may be applied to this degree.
- No more than 6 semester credits independent study or internships may be applied to this degree.
- Students must have a minimum cumulative GPA of 2.0 to be eligible to graduate.
- This degree does not meet Secondary Teaching Licensure requirements.
- Transfer Students must complete 15 semester credit hours that are part of their degree requirements at Front Range in order to earn a degree from Front Range.
- Submit graduation application, transfer credits, and credit for prior learning to Admissions & Records by published deadline.
- Continuing students who have not had a 12 month lapse in enrollment will be allowed to use the requirements listed in any catalog published while continuously attending.

Total Credit Hours: 60

Associate of Applied Science Degree

This degree prepares students to enter either skilled or paraprofessional occupations, or to upgrade in their current employment. These programs are not intended to transfer to bachelor's degree programs, but certain courses may be accepted toward a bachelor's degree at some institutions. FRCC awards the Associate of Applied Science Degree upon completion of a specific approved program listed in this catalog.

Assessment testing is required for all students. Students should consult with a faculty member before registering for courses in this program of study.

Approved General Education Electives List for Associate of Applied Science Degree

Communications:

ENG	ENG 121 and above
COM	All COM courses in this catalog

Arts and Humanities:

ARA	All ARA courses in this catalog
ART	All ART courses in this catalog
ASL	ASL 121, ASL 122, ASL 123, ASL 221, ASL 222

CHI	All CHI courses in this catalog
DAN	DAN 125
FRE	All FRE courses in this catalog
GER	All GER courses in this catalog
HUM	All HUM courses in this catalog
ITA	All ITA courses in this catalog
JPN	All JPN courses in this catalog
LIT	All LIT courses in this catalog
MUS	All MUS courses in this catalog
PHI	All PHI courses in this catalog
RUS	All RUS courses in this catalog
SPA	All SPA courses in this catalog
THE	All THE courses in this catalog
WST*	All WST courses in this catalog

*see AAS Elective Notes

Mathematics:

MAT	MAT 120 and above
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Science:

AST	All AST courses in this catalog
BIO	All BIO courses in this catalog
CHE	All CHE courses in this catalog
ENV	ENV 101
GEO	GEO 111, GEO 112
GEY	All GEY courses in this catalog
MET	All MET courses in this catalog
PHY	All PHY courses in this catalog
SCI	All SCI courses in this catalog

Social & Behavioral Science:

ANT	All ANT courses in this catalog
COM	COM 220
ECO	All ECO courses in this catalog
ETH	All ETH courses in this catalog
GEO	All GEO courses in this catalog
HIS	All HIS courses in this catalog
HWE	HWE 100, HWE 103, HWE 110, HWE 124
POS	All POS courses in this catalog
PSY	All PSY courses in this catalog
SOC	All SOC courses in this catalog
WST*	All WST courses in this catalog
GT	All Guaranteed Transfer courses in this catalog

* AAS Electives Notes:

1. WST may be used to fulfill an arts and humanities or social science and behavioral requirement, but not both.

No more than 6 semester credits in independent study or internships in these approved prefixes may be applied to the Associate of Applied Science degree.

Note: This list applies only to courses shown in the FRCC catalog, and to transfer credit which is equivalent to FRCC Catalog courses. Transfer courses which are identified with "999" course numbers (with the exception of Career Technical Electives) are also approved as elective credit.

Specific Certificate Requirements

- See instructional program, for specific certificate requirements.
- See commencement and graduation procedures in this catalog.

Courses Not Applicable to Any Degree or Certificate

Advancement of Academic Achievement:

AAA	All courses
English:	
ENG 030	Basic Writing Skills
ENG 060	Writing Fundamentals
ENG 090	Basic Composition
CCR 091	Composition and Reading Lab
CCR 092	Composition and Reading
CCR 093	Studio D
CCR 094	Studio 121
ENG 110*	English Usage and Grammar

* Applies only when specified as a certificate or an Associate of Applied Science Degree requirement.

English as a Second Language:

ESL	All courses
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General Education Development:

GED	All courses
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Mathematics:

MAT 030	Fundamentals of Mathematics
MAT 045	Compressed Pre Algebra with Basic Math
MAT 050	Quantitative Literacy
MAT 055	Algebraic Literacy
MAT 060	Pre-Algebra
MAT 090	Introductory Algebra
MAT 091	Applied Quantitative Lab
MAT 092	Quantitative Lab
MAT 093	Algebraic Lab

MAT 096 Combined Intro & Intermediate Algebra

MAT 099 Intermediate Algebra

MAT 101 Enhanced Mathematics Support

MAT 103* Math for Clinical Calculations

** Applies only when specified as a certificate or an Associate of Applied Science Degree requirement.*

Reading:

REA All courses

INSTRUCTIONAL PROGRAMS

At Front Range Community College, students may take classes to earn an associate degree or a certificate from among more than 100 areas. Credits from the State Guaranteed Education Courses are guaranteed to transfer to Colorado's public four-year institutions. Students may also take classes individually for their enrichment, or career development.

Career and Technical Education (CTE) certificate and AAS degree course requirements are subject to change due to Colorado Community College System mandated renewal cycles and program revisions. These program revisions are necessary to align with course changes in the Colorado Community College Common Course Numbering System and/or updated state or national accreditation standards specific to program content. A list of these accrediting agencies is available under the FRCC Program Accreditation section in this catalog. To verify the most accurate certificate and AAS degree requirements, please review DegreeCheck in eWOLF under the Student tab or view our online catalog addendum.

Programs Available by Campus

BC = Boulder County Campus

BR = Brighton Center

L = Larimer Campus

LV = Loveland

W = Westminster Campus

OL = Online

Not all degrees or certificates are available at all sites. Students should consult a schedule of classes to determine course offerings for each campus location.

FRCC also offers courses at the Brighton Center and Loveland.

Associate Degrees

Associate of Arts

Areas of Designation:

Anthropology	BC, L, W, OL
Art History	BC, L, W, OL
Business	BC, L, W, OL
Communication	BC, L, W, OL
Criminal Justice	BC, L, W, OL
Economics	BC, L, W, OL
English	BC, L, W, OL
French	BC, L, W, OL
Geography	BC, L, W, OL
History	BC, L, W, OL
Music	BC, L, W, OL
Philosophy	BC, L, W, OL
Political Science	BC, L, W, OL
Psychology	BC, L, W, OL
Sociology	BC, L, W, OL
Spanish	BC, L, W, OL
Studio Art	BC, L, W, OL
Theater	BC, L, W, OL

Other Transfer Agreements

The following transfer agreements have different requirements and guarantees from the agreements listed above. Please check with the university you wish to transfer into to ensure you are registering for the appropriate courses.

Early Childhood Education	BC, L, W, OL
Elementary Education	BC, L, W

Pre-Engineering	BC, L, W, OL	Forestry, Wildlife & Natural Resources (AQT) (NRE) (FSW)	L
		Natural Resources	L
		Forestry Technology	L
		Wildlife Technology	L
Associate of General Studies		Health Information Technology (HIT)	W
No Specified Area of Emphasis	BC, L, W	Heating, Ventilation, Air Conditioning and Refrigeration (HVA)	LV
Associate of Science Areas of Designation:		Holistic Health (HHP)	L, LV, OL
Biology	BC, L, W, OL	Horticulture and Landscape Technologies (HLT)	L, W
Chemistry	BC, L, W, OL	Hospitality and Culinary Arts Management (HOS) (CUA)	L
Geology	BC, L, W, OL	Culinarian	L
Horticulture Business Management	BC, L, W, OL	Events Planning	L
Mathematics	BC, L, W, OL	Hotel Management	L
Physics	BC, L, W, OL	Restaurant Management	L
Psychology	BC, L, W, OL	Interior Design (IND)	L, W
		Interpreter Preparation (IPP)	W
Associate of Applied Science		Manufacturing and Energy Technology (MTE)(ELT)(ENY)(EGT)(PPT)	L
Accounting (ACC)	BC, L, W, OL	Medical Office Technology (MOT)	BC
Applied Technology (Technical College/AVS - Transfer Agreement)	BC, L, W, OL	Billing Specialist	BC
Architectural and Building Science (AEC)	L	Medical Administrative Assisting	BC
Automotive Technology (ASE)	L, W	Medical Assisting	BC
Business (BUS)	BC, L, W, OL	Multimedia Technology (MGD)	BC, L, W
Business Logistics	W	Digital Animation	BC, W
Computer-Aided Drafting and Design (CAD)	L, W	Graphic Design	BC, W
Computer Information Systems (CIS)	BC, L, W, OL	Video Production and Editing	BC, W
Database Administration	BC, L, W	Web Design	BC, W
Programming	BC, L, W, OL	Nursing (NUR)	L, W
Web Developer	BC, L, W	Nursing Advanced Placement – Bridge Program (LPN to ADN)	BC
Computer Networking, Virtualization and Cybersecurity (CNG)	BC, L, W, OL	Paralegal Studies (PAR)	L, W
Cybersecurity	L, W	Veterinary Technology (VET)	L
Cloud Computing and Virtualization	L, W	Veterinary Technology (VET)	L
Network Administration	BC, L, W	Welding Technology (WEL)	L, W
Network Infrastructure	BC, L, W		
Early Childhood Education (ECE)	BC, L, W		

Certificates Available by Campus

BC = Boulder County Campus

BR = Brighton Center

L = Larimer Campus

LV = Loveland

W = Westminster Campus

OL = Online

Not all degrees or certificates are available at all sites. Students should consult a schedule of classes to determine course offerings for each campus location.

FRCC also offers courses at the Brighton Center and Loveland.

Certificates

Accounting (ACC) Certificates	BC, L, W, OL
Accounting	BC, L, W, OL
Enrolled Agent	BC, L, W
Intermediate Accounting	BC, L, W
Architectural and Building Science (AEC) Certificate	
Architectural Drafting	L, W
Automotive Technology (ASE) Certificates	
Automatic Transmission/Transaxle	L, W
Brakes	L, W
Electrical/Electronic Systems	L, W
Engine Performance	L, W
Engine Repair	L, W
General Automotive Maintenance & Repair	L, W
Heating and Air Conditioning	L, W
Light Diesel Engine Repair	L
Manual Drivetrain and Axles	L, W
Suspension and Steering	L, W
Business (BUS) Certificates	
Business Specialization	BC, L, W, OL
International Business Basics	BC, L, W, OL
Logistics	W
Management Basics	BC, L, W, OL
Marketing Basics	BC, L, W, OL
Project Management	W
Retail Management	BC, L, W, OL
Small Business Management Basics	BC, L, W, OL
Computer-Aided Drafting and Design (CAD) Certificates	
Advanced Architectural Computer-Aided Drafting	L, W
Advanced Mechanical CAD	L, W
Animation and Visualization CAD	L, W
Basic Computer-Aided Drafting and Design (CADD)	L, W
Advanced Civil CAD	L, W
Landscape CAD Technician	L, W
Computer Information Systems (CIS) Certificates	

Applications Specialist	BC, L, W, OL
Programming	BC, L, W, OL
Web Developer	BC, L, W

Computer Networking, Virtualization and Cybersecurity (CNG) Certificates

Cybersecurity	L, W
Cloud Computing & Virtualization	L, W
Microsoft Server Administration	BC, L, W
Computer Technician: Network+	BC, W
Linux Server Administration	BC, L
Network Technician	BC, L, W
Network Infrastructure	BC, L, W
Networking Basics	BC, L, W

Dental Assisting (DEA)

L

Early Childhood Education (ECE) Certificates

Early Childhood Director	BC, L, W, OL
Infant-Toddler Nursery Supervisor	BC, L, W, OL
Early Childhood Education for Paraeducators	BC, L, W, OL
Foundations of Early Childhood Education	BC, L, W

Emergency Medical Services (EMT) Certificates

Emergency Medical Technician	BC, L, LV, W
Pre-Paramedic	BC, L, LV, W

Forestry, Wildlife, and Natural Resources (AQT) (FST) (NRE) Certificates

Environmental Education	L
Forestry	L
Natural Resources	L
Natural Resources Geographic Information Systems	L
Natural Resources Recreation	L
Wildland Fire	L
Wildlife	L

Geographic Information Systems (GIS) Certificates

Geographic Information Systems	BC
GIS Fundamentals	BC

Heating, Ventilation, Air Conditioning and Refrigeration (HVA) Certificates

Residential Air Conditioning and Heating	LV		
Light Commercial Air Conditioning and Heating	LV		
Commercial Refrigeration	LV		
Holistic Health (HHP) Certificates			
Aromatherapy	OL		
Holistic Health	L, LV, OL		
Massage Therapy	LV		
Reflexology	L, LV		
Yoga Teacher	L, LV		
Horticulture and Landscape Technologies (HLT) Certificates			
Floral Design	L		
Horticulture	L, W		
Irrigation Contracting and Management	W		
Irrigation Technician	L, W		
Landscape CAD Technician	L, W		
Landscape Contracting Technician	L, W		
Landscape Maintenance Technician	L, W		
Landscape Design	L, W		
Nursery, Greenhouse and Garden Center Management	L, W		
Turfgrass Management	L, W		
Urban Agriculture Management	L, W		
Hospitality & Culinary Arts Management (HOS) Certificates			
Culinarian	L		
Events Planning	L		
Restaurant Management	L		
Hotel Management	L		
Interior Design (IND) Certificate			
Kitchen & Bath Design	L, W		
Manufacturing and Energy Technology Certificate		L	
Medical Office Technology (MOT) Certificates			
Billing Specialist		BC	
Health Care Office Assisting		BC	
Medical Administrative Assisting		BC	
Medical Assisting		BC	
			Multimedia Technology (MGD) Certificates
			Digital Animation
			BC, W
			Digital Imaging
			L
			Graphic Design Technician
			L
			Multimedia
			BC, W
			Graphic Design
			BC, W
			Video Production and Editing
			BC, W
			Web Design
			BC, W
			Nurse Aide (NUA) Certificate
			L, LV, W
			Nursing (NUR) Certificate
			Practical Nursing
			BC
			Paralegal Studies (PAR) Certificate
			Paralegal/Legal Assistant
			L, W, OL
			Pharmacy Technician (PHT) Certificate
			W
			Phlebotomy Certificate
			L, LV
			Precision Machining Technology Certificates
			Precision Machining Technology
			BC
			Manual Machining
			BC
			CAD/CAM
			BC
			Quality Control
			BC
			Teaching English as a Second Language (TEL) Certificates
			Teaching English as a Second Language Abroad (TESL-A)
			BC, L
			Teaching English as a Second Language K-12 (TESL-K)
			BC
			Veterinary Technology (VET) Certificates
			Basic Laboratory Animal Care
			L
			Veterinary Technician Assistant
			L
			Welding Technology (WEL) Certificates
			Comprehensive Welding
			L, W
			Gas Metal Arc Welding (MIG)
			L, W
			Gas Tungsten Arc Welding (TIG)
			L, W
			Oxyacetylene Welding
			L, W
			Pipe Code Welding
			L, W
			Creative Metalworking
			L, W
			Shielded Metal Arc Welding
			L, W
			Welding Fundamentals
			L, W

DEGREES AND CERTIFICATES

Accounting

ACCOUNTING - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_ACC2

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

The Accounting program has undergone program requirement changes after the printing of this catalog. To verify the most accurate certificate and AAS degree requirements, please review DegreeCheck in eWOLF under the Student tab or view our online Catalog Addendum.

This program offers a range of courses that provide an introduction to accounting theory and practice, as well as more extensive exposure to accounting applications in selected areas.

Courses meet the diverse needs of students and of clerical and paraprofessional accounting personnel in business, industry, government, and other economic organizations.

The AAS degree in accounting prepares students for job entry or job upgrading within a wide variety of clerical and paraprofessional positions in the accounting field. The program provides students with knowledge and skills needed to work effectively under the supervision of controllers, chief accountants, accounting supervisors, certified public accountants, and other professional accountants.

Note: Students are required to meet with an accounting program advisor to develop an educational plan before completing any elective courses.

For further information, contact Deb Craven at (303)-678-3868 for the Boulder Campus, Katheryn Reynolds at (970)-204-8503 for the Larimer Campus, and Bev Mason at (303)-404-5417 for the Westminster Campus.

All courses in both the degree and certificate programs must be completed with a "C" or above to graduate.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Required Courses

ACC 101	Fundamentals of Accounting	3
ACC 121	Accounting Principles I	4
ACC 122	Accounting Principles II	4
ACC 135	Spreadsheet Applications for Accounting	3
ACC 211	Intermediate Accounting I	4
ACC 245	Computerized Accounting with a Professional Package	3
ACC 289	Capstone: Company Financial Overview	1

ACC 280	or Internship	1-12
		Subtotal: 22

ACC 101: Students who have taken high school or other equivalent introductory coursework, or who have significant practical experience in these areas, should consult with an accounting faculty advisor to consider alternatives. This is particularly important for the decision of whether to take ACC 101, since ACC 101 may not be taken after ACC 121. Should a student decide to start accounting courses with ACC 121, the three credits for ACC 101 must be satisfied with an approved business elective; however an accounting course is recommended.

Required Elective Courses

Select 6 credits from the following: (must be approved by accounting advisor)

ACC 115	Payroll Accounting	3
ACC 131	Income Tax	3
ACC 138	Payroll and Sales Tax	3
ACC 212	Intermediate Accounting II	4
ACC 226	Cost Accounting	3
ACC 231	Business Taxation	3
ACC 255	Vita - Volunteer Income Tax Assistance	3
ACC 132	or Tax Help Colorado	2
ACC 133	and Tax Help Colorado Practicum	1
ACC 294	Service Learning	1-12
		Subtotal: 6

Required Business Support Courses

BUS 217	Business Communication and Report Writing	3
CIS 135	Complete PC Word Processing: Word	3
CIS 155	PC Spreadsheet Concepts: Excel	3
MAN 230	Corporate Ethics & Social Resp	3
	Elective Business Courses (ACC, BUS, CIS, ECO, MAN, MAR, or MGD)*	6
		Subtotal: 18

Elective Business Courses:

Students who have taken high school or other equivalent introductory coursework, or who have significant practical experience in these areas, should consult with an accounting faculty advisor to consider alternatives. This is particularly important for the decision of whether to take ACC 101, since ACC 101 may not be taken after ACC 121. Should a student decide to start accounting courses with ACC 121, the three credits for ACC 101 must be satisfied with an approved business elective; however an accounting course is recommended..

*Elective business courses (ACC, BUS, CIS, ECO, MAN, MAR, MGD) must be taken as needed to meet the 61 credit hours minimum for the degree. These courses must be ACC, BUS, CIS, ECO, MAN, MAR, or MGD courses, with prior approval from an accounting faculty advisor. In addition, general education

electives must be selected from the Approved Course List for the AAS degree in the Program Completion and Graduation Requirements section of this catalog.

Choose a course from the Approved General Education Electives List for the AAS degree (p. 56).

Required General Education Courses

	Arts and Humanities Elective	3
	Natural or Physical Sciences Elective	3
	Social and Behavioral Science Elective	3
MAT 107	Career Mathematics or higher	3

Electives: Choose a course from the Approved General Education Electives List for the AAS degree (p. 56).

one of the following courses

ENG 121	English Composition I	3
ENG 131	Technical Writing I	3
ENG 110	English Usage and Grammar	3

Subtotal: 15

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 61

Accounting - Certificates

ACCOUNTING

Field Code: F_CER_ACC2

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This accounting certificate prepares students for job entry into a wide variety of clerical and technical positions that have a recordkeeping or bookkeeping component. In consultation with an accounting faculty advisor, the certificate can be tailored to meet the needs of students who have already achieved significant skills and knowledge in basic accounting fundamentals and/or computer applications. The program assumes that students have previous knowledge and skill in basic computer applications in a Microsoft Windows operating environment. Students without prior computer experience should remedy any computer deficiencies before beginning the certificate course of study. Consulting with an accounting faculty advisor is strongly recommended before beginning the accounting certificate program.

REQUIREMENTS

Required Courses

ACC 101	Fundamentals of Accounting	3
ACC 115	Payroll Accounting	3
ACC 121	Accounting Principles I	4

ACC 245	Computerized Accounting with a Professional Package	3
BUS 217	Business Communication and Report Writing	3
CIS 135	Complete PC Word Processing: Word	3
CIS 155	PC Spreadsheet Concepts: Excel	3

Subtotal: 22

ACC 101 and CIS 155: Students who have taken high school or other equivalent introductory coursework, or who have significant practical experience in these areas, should consult with an accounting faculty advisor to consider alternatives. This is particularly important for the decision of whether to take ACC 101, since ACC 101 may not be taken after ACC 121. Should a student decide to start accounting courses with ACC 121, the three credits for ACC 101 must be satisfied with an approved business elective; however an accounting course is recommended.

Required Elective Courses

Select 3 credits from the following:

ACC 122	Accounting Principles II	4
ACC 131	Income Tax	3
ACC 135	Spreadsheet Applications for Accounting	3
ACC 138	Payroll and Sales Tax	3
ACC 255	Vita - Volunteer Income Tax Assistance or	3
ACC 132	Tax Help Colorado and	2
ACC 133	Tax Help Colorado Practicum	1
BUS 216	Legal Environment of Business	3
CIS 145	Complete PC Database: ACCESS	3

Total Credit Hours: 25

ENROLLED AGENT

Field Code: F_CER_ENRA

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This accounting certificate allows students to gain the necessary practical skills needed to study for and take the IRS Special Enrollment Examinations. An enrolled agent is certified by the IRS to perform income tax preparation for individuals, corporations, estates, and trusts.

In consultation with an accounting faculty advisor, this certificate can be tailored to meet the needs of students who have already achieved significant knowledge and skills in tax preparation.

The program assumes that students have previous knowledge and skill in basic computer applications in a Microsoft Windows operating environment. Students without prior computer experience should remedy any computer deficiencies before beginning the certificate course of study.

Consulting with an accounting faculty advisor is strongly recommended before beginning the enrolled agent certificate program.

REQUIREMENTS**Required Courses**

ACC 121	Accounting Principles I	4
ACC 122	Accounting Principles II	4
ACC 131	Income Tax	3
ACC 231	Business Taxation	3
ACC 245	Computerized Accounting with a Professional Package	3
ACC 255	Vita - Volunteer Income Tax Assistance	3
ACC 132	Tax Help Colorado	2
ACC 133	Tax Help Colorado Practicum	1
ACC 265	Enrolled Agent Exam Review Course	3
MAN 230	Corporate Ethics & Social Resp	3
PHI 205	Business Ethics	3

Total Credit Hours: 26**INTERMEDIATE ACCOUNTING**

Field Code: F_CER_ACC4

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This accounting certificate prepares a student to move beyond an Associate of Applied Science degree by offering an intermediary option of core accounting and relevant business classes before entering the workforce or transferring to a four year college. For students who have earned a Bachelor's degree in Business Administration this certificate will provide a focus on accounting. The certificate will qualify students for job opportunities and advancements in paraprofessional positions within the accounting industry. Depending on current regulations, this certificate may also serve as a starting point for the CPA exam.

In consultation with an accounting faculty advisor, the certificate can be tailored to meet the needs of students who have already achieved significant skills and knowledge in accounting.

The program assumes that students have previous knowledge and skill in basic computer applications in a Microsoft Windows operating environment. Students without prior computer experience should remedy any computer deficiencies before beginning the certificate course of study.

Consulting with an accounting faculty advisor is strongly recommended before beginning the intermediate accounting certificate program.

REQUIREMENTS**Required Courses**

ACC 211	Intermediate Accounting I	4
ACC 212	Intermediate Accounting II	4
BUS 216	Legal Environment of Business	3
BUS 226	Business Statistics	3
ECO 201	Principles of Macroeconomics	3
ECO 202	Principles of Microeconomics	3
FIN 201	Principles of Finance	3

MAN 230	Corporate Ethics & Social Resp	3
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Choose one of the following

ACC 216	Govt & Not-for-profit Accounting	3
ACC 226	Cost Accounting	3
ACC 231	Business Taxation	3
ACC 245	Computerized Accounting with a Professional Package	3

One of the following courses

ACC 280	Internship	1-12
ACC 285	Independent Study	1
ACC 294	Service Learning	1-12

Total Credit Hours: 30**ACCOUNTING TRANSFER**

Field Code:

Campus:

The AAS degree in accounting, as presented above, is offered primarily as a job-entry or job-advancement program, rather than as a transfer program. Selected courses may transfer to some four-year colleges, but such transfer is neither standardized nor consistent.

ACC 121 Accounting Principles I and ACC 122 Accounting Principles II are the courses that ordinarily transfer entirely or partially to most college business programs.

Students whose primary objective is to transfer to a baccalaureate business or accounting degree program should consult both an accounting faculty advisor and an FRCC academic advisor before declaring a major and before selecting accounting or business courses.

Applied Technology**APPLIED TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE DEGREE**

Field Code: F_AAS_APT1

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

Students desiring to complete the AAS degree in Applied Technology may complete the technical coursework contained in a state-approved certificate career and technical education program at one of the Area Vocational Technical Colleges/AVS: Delta-Montrose Technical College, Emily Griffith Technical College and Pickens Technical College.

The general education and other degree requirements are completed at one of the Colorado public community/junior colleges. The AAS degree is conferred by the community college at which the general education and other degree requirements have been completed.

The approved certificate career and technical education programs at the technical colleges prepare students with technical, applied academic, and employability skills. Credit in varying amounts from these certificate programs is applicable to the community college's AAS degree in Applied Technology.

Individual coursework from the technical college is credited to the student's transcript upon completion of the requirements of

both institutions. Students may enroll concurrently at both a technical college and a community college. Students must comply with the regulations and requirements relating to admission and attendance at each institution.

REQUIREMENTS

Minimum requirements for the AAS degree in Applied Technology include the completion of:

1. Minimum of 60 semester credits of coursework.
2. All courses in both the degree and certificates must be completed with a "C" or above to graduate.
3. Fifteen (15) semester credits of general education courses.
4. Forty-five (45) semester credits from an individual state approved program at one of the technical colleges. If the technical college program certificate is less than 45 semester credits, the program certificate credits plus elective credit hours from the community college are used for the total of at least 45 semester credits.
5. Minimum of 15 semester credits earned at the community college.

Required General Education Courses

Select from the Approved General Education Electives List for the AAS degree (p. 56).

Communications	3
Arts and Humanities	3
Mathematics	3
Natural and Physical Sciences	3
Social and Behavioral Sciences	3

Subtotal: 15

Required Technical College Courses

Subtotal: 45

Gainful Employment Disclosure Information

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Total Credit Hours: 60

Architectural Engineering and Construction Technology

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 055 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

For further information, call Ms. Lisa Compton at 303-404-5612 or email lisa.compton@frontrange.edu for Westminster students. Contact Mr. Jamie Hahn at 970-204-8380 or email jamie.hahn@frontrange.edu for Larimer students.

All courses applied to the degree or certificate must be completed with a grade of "C" or above.

ARCHITECTURAL AND BUILDING SCIENCE - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_ARB

Campus: Larimer Campus

This degree is a comprehensive two-year study in architectural drafting, elementary design and building science. The program emphasizes green/sustainable architectural practices and essential technical concepts used in architectural CAD and building information modeling (BIM). It prepares students for employment in the following areas: architectural CAD drafting technician for architectural design and construction firms, governmental entities, large corporations, and manufacturers/suppliers or building products. Graduates may also pursue further study in architecture or engineering.

REQUIREMENTS

Required Courses

AEC 101	Basic Architectural Drafting	4
AEC 102	Residential Construction Drawing	4
AEC 121	Construction Materials and Systems	3
AEC 122	Construction Practices and Documents	2
AEC 123	Commercial Construction Drawings	4
AEC 200	Building Design Development	3
AEC 208	Building Environmental Systems I	3
AEC 218	Sustainable Building Systems	3
CAD 101	Computer-Aided Drafting I	3
CAD 224	Revit Architecture	3

Subtotal: 32

Students must work with an advisor in order to select the 12 elective credits from among the following courses (those appropriate in the students occupational interests):

Elective Courses

AEC 205	Applied Statics and Strengths of Materials	3
AEC 215	Elementary Site Planning	3
AEC 216	Construction Estimating	3
CAD 102	Computer-Aided Drafting II	3
CAD 115	Sketchup	3
CAD 222	Navisworks/Autodesk	3
CAD 227	Advanced Revit Architecture	3
CAD 255	Solidworks/Mechanical	3
IND 114	Space Planning	3
IND 200	Kitchen and Bath Design I	4
IND 231	Sustainable Design	3

Subtotal: 12

Required General Education Courses

ART 121	Drawing I	3
ENG 121	English Composition I	3
	or	
ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
MAT 122	College Trigonometry	3
	or	
	Any higher GT-MA1 course	
PHY 105	Conceptual Physics with Lab	4

Subtotal: 17

Note: PHY 105 students desiring professional advancement in this field should consider taking PHY 111 Physics: Algebra-Based I with Lab (5 credit hours) to satisfy general education requirements in physics.

Note: MAT 122 is online only

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 61

ARCHITECTURAL DRAFTING - CERTIFICATE

Field Code: F_CER_DRA1

Campus: Larimer Campus, Westminster Campus

This certificate provides students with entry-level drafting and CAD skills. This certificate emphasizes foundation concepts in building information modeling (BIM).

REQUIREMENTS

Required Courses

AEC 101	Basic Architectural Drafting	4
AEC 102	Residential Construction Drawing	4
AEC 121	Construction Materials and Systems	3
AEC 122	Construction Practices and Documents	2
AEC 123	Commercial Construction Drawings	4
CAD 101	Computer-Aided Drafting I	3
CAD 102	Computer-Aided Drafting II	3
CAD 224	Revit Architecture	3

Total Credit Hours: 26

Automotive Technology

AUTOMOTIVE TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_AUT

Campus: Larimer Campus, Westminster Campus

This program provides students with entry-level skills and upgrading for those in the automotive field. Program graduates use their technical skills to test, diagnose, and repair the complex mechanical, chemical, and electronic equipment found in today's automobiles. This includes an understanding of the principles associated with engines and drive trains, brakes and alignment, and fuel and emission controls. All automotive technology programs are National Automotive Technician's Education Foundation (NATEF)-accredited, and all program instructors are ASE certified.

Automotive Technology coursework is offered on an open entry basis: students may complete some of the courses, enter the workforce, and then return to complete the program or upgrade

a specific skill. Specific courses may not be offered every semester. Working professionals may take individual classes to upgrade skills without earning a degree. Credit may be granted for previous education/training or related work experience. Demonstrated mastery of skills is required. Refer to Credit for Prior Learning section.

Articulation agreements exist with many local secondary and postsecondary vocational programs. Contact a program advisor to determine whether credit may be awarded for previous training.

Assessment testing is required for all students. Students who place into CCR 092 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

All courses applied to the degree and/or certificate must be completed with a grade of "C" or above.

Students with relevant coursework and/or relevant industry job experience should contact an ASE faculty/advisor to determine if credit can be granted.

Students MUST meet with an ASE faculty/Advisor before registration.

REQUIREMENTS

Required Courses

ASE 101	Automotive Shop Orientation	2
ASE 110	Brakes I	2
ASE 111	Brakes II	2
ASE 120	Basic Automotive Electricity	2
ASE 122	Basic Automotive Electrical Safety Systems	1
ASE 123	Battery, Starting and Charging Systems	2
ASE 130	General Engine Diagnosis	2
ASE 134	Automotive Fuel and Emissions Systems I	2
ASE 140	Suspension and Steering I	2
ASE 141	Suspension and Steering II	2
ASE 150	Manual Drive Train and Axle Maintenance	2
ASE 151	Automotive Manual Transmission/Transaxles and Clutches I	2
ASE 152	Manual Transmission, Transaxles and Clutches II	2
ASE 160	Automotive Engine Repair	2
ASE 161	Engine Repair and Rebuild	3
ASE 162	Automotive Engine Service	2
ASE 210	Automotive Power and ABS Brake Systems	2
ASE 221	Auto/Diesel Body Electrical	4
ASE 231	Automotive Computers and Ignition Systems	2
ASE 233	Automotive Fuel Injection and Emission Systems II	4
ASE 240	Suspension and Steering III	2
ASE 250	Automatic Transmission/Transaxle Service	1
ASE 251	Automatic Transmission/Transaxle Repair	3

ASE 264	Introduction to Automotive Heating and Air Conditioning	1
ASE 265	Heating and Air Conditioning Systems	4
MTE 110	Manufacturing Communication and Teamwork	3

Subtotal: 58**Required General Education Courses**

ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 107	Career Mathematics or	3
MAT 108	Technical Mathematics or any GT-MA1 course	4
PHY 105	Conceptual Physics with Lab Social Science or Arts and Humanities Elective	4 3
	General Studies Elective	3

Subtotal: 16

Note: ASE 285 Independent Study may be substituted for any of the ASE modules with permission of the instructor and cannot exceed 12 credit hours. Additional courses are listed and described in the Course Offerings section of this catalog.

Social Science or Arts, Humanities and General Elective: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 74**Automotive Technology - Certificates****AUTOMATIC TRANSMISSION/TRANSAXLE**

Field Code: F_CER_AAUT

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 150	Manual Drive Train and Axle Maintenance	2
ASE 152	Manual Transmission, Transaxles and Clutches II	2
ASE 250	Automatic Transmission/Transaxle Service	1
ASE 251	Automatic Transmission/Transaxle Repair	3

Total Credit Hours: 10**BRAKES**

Field Code: F_CER_AUB

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 110	Brakes I	2
ASE 111	Brakes II	2
ASE 120	Basic Automotive Electricity	2
ASE 210	Automotive Power and ABS Brake Systems	2

Total Credit Hours: 10**ELECTRICAL/ELECTRONIC SYSTEMS**

Field Code: F_CER_AAEE

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 120	Basic Automotive Electricity	2
ASE 122	Basic Automotive Electrical Safety Systems	1
ASE 123	Battery, Starting and Charging Systems	2
ASE 221	Auto/Diesel Body Electrical	4
ASE 231	Automotive Computers and Ignition Systems	2

Total Credit Hours: 13**ENGINE PERFORMANCE**

Field Code: F_CER_ENPR

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 120	Basic Automotive Electricity	2
ASE 122	Basic Automotive Electrical Safety Systems	1
ASE 123	Battery, Starting and Charging Systems	2
ASE 130	General Engine Diagnosis	2
ASE 134	Automotive Fuel and Emissions Systems I	2
ASE 231	Automotive Computers and Ignition Systems	2
ASE 233	Automotive Fuel Injection and Emission Systems II	4

Total Credit Hours: 17**ENGINE REPAIR**

Field Code: F_CER_AER

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 120	Basic Automotive Electricity	2
ASE 130	General Engine Diagnosis	2
ASE 160	Automotive Engine Repair	2
ASE 161	Engine Repair and Rebuild	3
ASE 162	Automotive Engine Service	2

Total Credit Hours: 13**GENERAL AUTOMOTIVE MAINTENANCE AND REPAIR**

Field Code: F_CER_GAMR

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 110	Brakes I	2
ASE 120	Basic Automotive Electricity	2
ASE 130	General Engine Diagnosis	2
ASE 140	Suspension and Steering I	2

Total Credit Hours: 10**HEATING AND AIR CONDITIONING**

Field Code: F_CER_ATAC

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 120	Basic Automotive Electricity	2
ASE 264	Introduction to Automotive Heating and Air Conditioning	1
ASE 265	Heating and Air Conditioning Systems	4

Total Credit Hours: 9**LIGHT DIESEL ENGINE REPAIR**

Field Code: F_CER_ATDT

Campus: Larimer Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 120	Basic Automotive Electricity	2
ASE 123	Battery, Starting and Charging Systems	2
DPM 100	Introduction to Diesel Mechanics	2
DPM 103	Diesel Engines I	4
DPM 203	Diesel Engines II	4

Total Credit Hours: 16**MANUAL DRIVETRAIN AND AXLES**

Field Code: F_CER_AUTW

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 120	Basic Automotive Electricity	2
ASE 150	Manual Drive Train and Axle Maintenance	2
ASE 151	Automotive Manual Transmission/Transaxles and Clutches I	2
ASE 152	Manual Transmission, Transaxles and Clutches II	2

Total Credit Hours: 10**SUSPENSION AND STEERING**

Field Code: F_CER_AUTS

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ASE 101	Automotive Shop Orientation	2
ASE 120	Basic Automotive Electricity	2
ASE 140	Suspension and Steering I	2
ASE 141	Suspension and Steering II	2
ASE 240	Suspension and Steering III	2

Total Credit Hours: 10**Business****Business - Associate of Applied Science Degree Pathways****BUSINESS**

Field Code: F_AAS_BUS3

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This program is designed to give students the flexibility to develop a customized business degree. Required courses include foundational business, as well as general education courses. With the assistance of a business faculty advisor, students develop a customized educational plan for their business elective courses. (NOTE: Students are highly encouraged to meet with a business faculty advisor each semester BEFORE registering for classes).

All courses in the degree and certificate programs must be completed with a "C" or above.

Articulation agreements exist with many secondary and post-secondary programs. Contact a program advisor to determine whether credits may be awarded.

For further information, contact Kathleen Dodaro at 303-404-5450 for Westminster Campus, Deborah Craven at 303-678-3868 for Boulder Campus, and Tiffany Broesche at 970-204-8502 for Larimer Campus.

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 055 or above may begin this program of study. Students scoring below this level should consult with a business faculty advisor before registering for courses in this program of study.

REQUIREMENTS

Required Major Courses

ACC 121	Accounting Principles I	4
BUS 115	Introduction to Business	3
BUS 216	Legal Environment of Business	3
BUS 217	Business Communication and Report Writing	3
BUS 226	Business Statistics	3
BUS 289	Capstone or	2
BUS 281	Internship	2
MAN 226	Principles of Management	3
MAN 230	Corporate Ethics & Social Resp	3
MAR 216	Principles of Marketing	3
	Electives: CIS	3
	Electives: ACC, BUS, CIS, CSC, CNG, CWB, ECO, FIN, MAN, MAR, MGD	15

Subtotal: 45

BUS 281: final semester

Required General Education Courses

ECO 201	Principles of Macroeconomics or	3
ECO 202	Principles of Microeconomics	3
ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences Elective	3

Subtotal: 16

Arts and Humanities and Natural & Physical Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.fronrange.edu/GainfulEmployment.

Total Credit Hours: 61

BUSINESS LOGISTICS

Field Code: F_AAS_BSLG

Campus: Westminster Campus

This program is designed to give students the flexibility to develop a customized business degree. Required courses include foundational business, as well as general education courses. With the assistance of a business faculty advisor, students develop a customized educational plan for their business

elective courses. (NOTE: Students are highly encouraged to meet with a business faculty advisor each semester BEFORE registering for classes).

All courses in the degree and certificate programs must be completed with a "C" or above.

Articulation agreements exist with many secondary and post-secondary programs. Contact a program advisor to determine whether credits may be awarded.

For further information, contact Abel Coombs at 303-404-5440 for the Westminster Campus.

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 055 or above may begin this program of study. Students scoring below this level should consult with a business faculty advisor before registering for courses in this program of study.

REQUIREMENTS

Required Major Courses

ACC 121	Accounting Principles I	4
BUS 115	Introduction to Business	3
BUS 201	Business Logistics Optimization	3
BUS 202	Purchasing, Supply, and Sourcing Logistics	3
BUS 216	Legal Environment of Business	3
BUS 217	Business Communication and Report Writing	3
BUS 218	Legal Environment of Business II	3
BUS 226	Business Statistics	3
BUS 289	Capstone or	2
BUS 281	Internship	2
MAN 105	Logistics Management	3
MAN 226	Principles of Management	3
MAN 230	Corporate Ethics & Social Resp	3
MAR 216	Principles of Marketing	3
	Electives: Any CIS and/or GIS 101, GIS 131 or GIS 220	

Subtotal: 45

BUS 281: final semester

Required General Education Courses

ECO 201	Principles of Macroeconomics or	3
ECO 202	Principles of Microeconomics	3
ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences Elective	3

Subtotal: 16

Arts and Humanities and Natural & Physical Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

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Total Credit Hours: 61

ASSOCIATE OF ARTS DEGREE WITH BUSINESS DESIGNATION

Field Code:

Campus:

FRCC provides a transfer pathway in business to many Colorado state four-year colleges and universities. Students interested in transferring should view the Associate Degrees with Designation section of this catalog.

Business - Certificates

BUSINESS SPECIALIZATION

Field Code: F_CER_BSPC

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

Students interested in the business specialization certificate MUST meet with a business faculty advisor to develop a specialization. This certificate is targeted at specific business categories; therefore, at least 3 credits must be selected from the BUS prefix and 6 credits selected from the following prefixes: ACC, BUS, CIS/CSC/CNG/CWB, ECO, MAN, MAR, MGD, or FIN.

Total Credit Hours: 9

INTERNATIONAL BUSINESS BASICS

Field Code: F_CER_BUSN

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This certificate program is designed for individuals who seek to develop and improve skills in international business.

REQUIREMENTS

Required Courses

BUS 115	Introduction to Business	3
BUS 203	Introduction to International Business	3
MAR 240	International Marketing	3

Total Credit Hours: 9

LOGISTICS

Field Code: F_CER_LOG

Campus: Westminster Campus

Students who successfully earn a FRCC Certificate in Logistics will have a comprehensive understanding of distribution, warehousing, purchasing and transportation. Warehousing addresses the storage and staging of materials for their ultimate need and end use. Purchasing addresses the associated costs of materials in conjunction with and interrelated with transportation, distribution and warehousing.

REQUIREMENTS

Required Courses

BUS 201	Business Logistics Optimization	3
BUS 202	Purchasing, Supply, and Sourcing Logistics	3
BUS 217	Business Communication and Report Writing	3
BUS 218	Legal Environment of Business II	3
MAN 105	Logistics Management	3

Total Credit Hours: 15

MANAGEMENT BASICS

Field Code: F_CER_MAN6

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This certificate program is designed for individuals who seek to develop and improve their business management skills.

REQUIREMENTS

Required Courses

BUS 115	Introduction to Business	3
BUS 217	Business Communication and Report Writing	3
MAN 226	Principles of Management	3

Total Credit Hours: 9

MARKETING BASICS

Field Code: F_CER_MAR6

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This certificate program prepares students to perform marketing, administration, or support functions in organizations related to promotion, sales, public relations, retailing, or advertising operations.

REQUIREMENTS

Required Courses

MAR 111	Principles of Sales	3
MAR 216	Principles of Marketing	3
MAR 220	Principles of Advertising	3

Total Credit Hours: 9

PROJECT MANAGEMENT

Field Code: F_CER_PRJ1

Campus: Brighton Center, Westminster Campus

This certificate program introduces the tools and skills necessary to develop and implement project management planning that can be used in a multitude of different industries including

biotech, construction, information systems, marketing, telecommunications, engineering, and manufacturing.

REQUIREMENTS

Required Courses

MAN 241	Project Management in Organizations	3
MAN 243	Project Management in Action	3
CIS 202	Automated Project Management: MS Project	3

Total Credit Hours: 9

RETAIL MANAGEMENT

Field Code: F_CER_BRM

Campus: Boulder County Campus, Brighton Center, Larimer Campus, Westminster Campus, Online Learning

This certificate program prepares students for the fast-paced changes taking place in the retail and grocery industry, so they are prepared to fill the numerous and varied management opportunities available. This broad program is appropriate for retailers AND suppliers and is endorsed by the Western Association of Food Chains (WAFC). All of the WAFC member grocery chains recognize this unique Retail Management Certificate (www.wafc.com). Some classes will be offered in hybrid, online, or 7 1/2 week formats.

REQUIREMENTS

Required Courses

BUS 217	Business Communication and Report Writing	3
CIS 118	Introduction to PC Applications	3
MAN 128	Human Relations in Organizations	3
MAN 200	Human Resources Management I	3
MAN 225	Managerial Finance	3
MAN 226	Principles of Management	3
MAR 117	Principles of Retailing	3
MAR 216	Principles of Marketing	3

Total Credit Hours: 24

SMALL BUSINESS MANAGEMENT BASICS

Field Code: F_CER_SBM6

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This certificate program prepares students for the entrepreneurial challenge of starting and operating a business effectively.

REQUIREMENTS

Required Courses

BUS 102	Entrepreneurial Operations	3
MAN 216	Small Business Management	3
BUS 217	Business Communication and Report Writing	3
MAR 216	Principles of Marketing	3
MAN 225	Managerial Finance	3

Total Credit Hours: 9

Computer-Aided Drafting and Design

This program provides career opportunities to the advanced computer-aided drafting and design technician. It is designed to offer advanced training for the professional and technician already in the field or for students in a related drafting program.

Assessment testing is required for all students. Students who are reading at the college level and place into CCR 093 or above and MAT 055 or above may begin this program of study. All courses applied to the certificates must be completed with a grade of "C" or above.

COMPUTER AIDED DRAFTING AND DESIGN - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_CAD4

Campus: Larimer Campus, Westminster Campus

This program provides advanced CAD skills to the student seeking a career within computer-aided drafting and design. The student will complete 2D and 3D projects using the most current releases of the CAD software. Upon completion of this AAS degree, the student is prepared to enter the workforce as a CAD technician.

This program will meet unique computer-aided drafting and design, CAD illustration, and graphics needs. With the growth of employment needs in small- to mid-sized companies, employers are increasingly seeking employees with advanced and specialized computer-aided drafting skills.

Coursework is offered on an open-entry basis: students may complete some of the courses, enter the workforce, and then return to complete the program or upgrade a specific skill. Some certificates and courses may not be offered every semester or at every campus. Please work with a program advisor in selection of your courses. Please contact Claudia Romero, 970-204-8632 at the Larimer Campus or Lisa Compton, 303-404-5612, at the Westminster Campus.

REQUIREMENTS

All courses applied to the degree must be completed with a grade of "C" or above.

Required Courses

CAD 100	Print Reading for CAD	3
CAD 101	Computer-Aided Drafting I	3
CAD 102	Computer-Aided Drafting II	3
CAD 115	Sketchup	3
CAD 201	Computer-Aided Drafting/Custom	3
CAD 202	Computer-Aided Drafting/3D	3
CAD 219	3DS/MAX	3
CAD 262	3D Printing	3
CAD 289	Capstone	1-6
	Required Electives: CIS, MGD	6

Students should enroll in 3 credits of CAD 289.

Choose one of the following drawing courses:

AEC 101	Basic Architectural Drafting	4
EGT 101	Technical Drafting I	3
EGT 143	Civil/Survey Drafting I	3
HLT 130	Landscape Design I	3

Subtotal: 36

Required General Education Courses

ART 121	Drawing I	3
ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 107	Career Mathematics or higher	3
	Natural and Physical Sciences elective from the AAS General Education Electives List	3
	Social and Behavioral Sciences elective from the AAS General Education Electives List	3

Subtotal: 15**Drafting and CAD Elective Courses:**

Students are strongly advised to work with a CAD program advisor in order to select at least 9 credits from among the following courses: (Those appropriate in the student's occupational interests). Not all courses are offered at every campus.

AEC 102	Residential Construction Drawing	4
AEC 123	Commercial Construction Drawings	4
AEC 215	Elementary Site Planning	3
CAD 216	Advanced Sketchup	3
CAD 220	3DS/MAX Advanced Character Modeling	3
CAD 221	3DS/MAX Advanced Architectural Visualization	3
CAD 222	Navisworks/Autodesk	3
CAD 224	Revit Architecture	3
CAD 225	Autocad Architecture	3
CAD 227	Advanced Revit Architecture	3
CAD 229	Revit Structure	3
CAD 233	Civil 3D/Autodesk 3D	3
CAD 240	Inventor I/Autodesk	3
CAD 244	Advanced Inventor	3
CAD 255	Solidworks/Mechanical	3
CAD 259	Advanced Solidworks	3
EGT 205	Geometric Dimension & Tolerance	3
GIS 101	Introduction to Geographic Information Systems	3
HLT 230	Landscape Design II	3
IND 114	Space Planning	3
IND 200	Kitchen and Bath Design I	4
IND 261	Advanced Kitchen and Bath Design	4

Subtotal: 9**Gainful Employment Disclosure Information**

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 60**Computer-Aided Drafting and Design - Certificates****BASIC COMPUTER-AIDED DRAFTING AND DESIGN**

Field Code: F_CER_CAD4

Campus: Larimer Campus, Westminster Campus

This certificate prepares students to become proficient in the use of computer-aided drafting.

All courses applied to the certificates must be completed with a grade of "C" or above.

Not all certificates are offered at both campuses, please inquire with the campus Program Director or CAD Faculty for more information.

REQUIREMENTS**Required Courses**

CAD 100	Print Reading for CAD	3
CAD 101	Computer-Aided Drafting I	3
CAD 102	Computer-Aided Drafting II	3
CAD 115	Sketchup	3
CAD 180	Internship	1-6
	or	
CAD 185	Independent Study	1-6
	or	
CAD 289	Capstone	1-6

Subtotal: 13

Students should enroll in 1 credit of CAD 289 for this certificate.

Choose from one of the following drawing courses:

AEC 101 Basic Architectural Drafting (4)
EGT 101 Technical Drafting I (3)
EGT 143 Civil/Survey Drafting I (3)
HLT 130 Landscape Design I (3)
IND 114 Space Planning (3)

Interior Design students must take CAD 105 AutoCAD for Interiors (4 credits) in replace of CAD 101 (3 credits) and CAD 102 (3 credits). The remaining 2 credits may be fulfilled by any CAD or IND related course work.

Total Credit Hours: 16**ADVANCED ARCHITECTURAL COMPUTER-AIDED DRAFTING**

Field Code: F_CER_CADA

Campus: Larimer Campus, Westminster Campus

See also *Architectural Engineering and Construction Technology*, (p. 66)

This certificate prepares students to become proficient in the use of advanced architectural computer-aided drafting software with a concentration in Architectural CAD applications.

All courses applied to the certificates must be completed with a grade of "C" or above.

Not all certificates are offered at both campuses, please inquire with the campus Program Director or CAD Faculty for more information.

REQUIREMENTS

Required Courses

AEC 102	Residential Construction Drawing	4
CAD 201	Computer-Aided Drafting/Custom	3
CAD 202	Computer-Aided Drafting/3D	3
CAD 216	Advanced Sketchup	3
CAD 219	3DS/MAX	3
CAD 224	Revit Architecture	3
CAD 227	Advanced Revit Architecture	3
	MGD Electives	3

Subtotal: 25

Choose one of the following courses:

CAD 289	Capstone	1-6
AEC 280	Internship	3
AEC 285	Independent Study	3

Total Credit Hours: 28

ADVANCED MECHANICAL COMPUTER-AIDED DRAFTING

Field Code: F_CER_CADX

Campus: Larimer Campus, Westminster Campus

This certificate prepares students to become proficient in the use of advanced mechanical computer-aided drafting software with a concentration in Mechanical CAD applications.

All courses applied to the certificates must be completed with a grade of "C" or above.

Not all certificates are offered at both campuses, please inquire with the campus Program Director or CAD Faculty for more information.

REQUIREMENTS

Required Courses

CAD 201	Computer-Aided Drafting/Custom	3
CAD 202	Computer-Aided Drafting/3D	3
CAD 216	Advanced Sketchup	3
CAD 219	3DS/MAX	3
CAD 255	Solidworks/Mechanical	3
CAD 262	3D Printing	3
CAD 289	Capstone	1-6
EGT 205	Geometric Dimension & Tolerance	3

Subtotal: 24

Students should enroll in 3 credits of CAD 289.

Electives (Choose 3 Credits)

CAD 240	Inventor I/Autodesk	3
CAD 244	Advanced Inventor	3
CAD 259	Advanced Solidworks	3

Subtotal: 3

Total Credit Hours: 27

ANIMATION AND VISUALIZATION COMPUTER-AIDED DRAFTING

Field Code: F_CER_CADV

Campus: Larimer Campus

See also Multimedia Technology (p. 112).

This certificate prepares students to become proficient in the use of advanced computer-aided drafting software with a concentration in 3D graphics and animation and visualization applications.

All courses applied to the certificates must be completed with a grade of "C" or above.

Not all certificates are offered at both campuses, please inquire with the campus Program Director or CAD Faculty for more information.

REQUIREMENTS

Required Courses

CAD 202	Computer-Aided Drafting/3D	3
CAD 216	Advanced Sketchup	3
CAD 219	3DS/MAX	3
CAD 220	3DS/MAX Advanced Character Modeling	3
	or	
CAD 221	3DS/MAX Advanced Architectural Visualization	3
CAD 289	Capstone	1-6
	MGD Electives	3

Subtotal: 18

Students should enroll in 3 credits of CAD 289.

Total Credit Hours: 18

ADVANCED CIVIL COMPUTER-AIDED DRAFTING

Field Code: F_CER_CDV1

Campus: Larimer Campus

This certificate prepares students to become proficient in the use of advanced civil computer-aided drafting software with a concentration in Civil CAD applications.

All courses applied to the certificates must be completed with a grade of "C" or above.

Not all certificates are offered at both campuses, please inquire with the campus Program Director or CAD Faculty for more information.

REQUIREMENTS

Required Courses

CAD 201	Computer-Aided Drafting/Custom	3
CAD 202	Computer-Aided Drafting/3D	3
CAD 216	Advanced Sketchup	3
CAD 219	3DS/MAX	3
CAD 233	Civil 3D/Autodesk 3D	3
CAD 289	Capstone	1-6
EGT 243	Civil/Survey Drafting II	3
GIS 101	Introduction to Geographic Information Systems	3

Subtotal: 24

Students should enroll in 3 credits of CAD 289.

Total Credit Hours: 24

LANDSCAPE COMPUTER-AIDED DRAFTING TECHNICIAN

Field Code: F_CER_CAL1

Campus: Larimer Campus, Westminster Campus

See also Horticulture and Landscape Technologies.

This certificate integrates instruction in advanced computer aided drafting software technologies, landscape design and landscape construction to prepare students to become proficient in the use of computer-aided drafting as it is used in the landscape architecture and landscape design field.

All courses applied to the certificates must be completed with a grade of "C" or above.

Not all certificates are offered at both campuses, please inquire with the campus Program Director or CAD Faculty for more information.

REQUIREMENTS

Required Courses

CAD 201	Computer-Aided Drafting/Custom	3
CAD 202	Computer-Aided Drafting/3D	3
CAD 216	Advanced Sketchup	3
CAD 219	3DS/MAX	3
CAD 289	Capstone	1-6
	or	
HLT 287	Cooperative Education	3

Subtotal: 15

Students should enroll in 3 credits of CAD 289.

Required Elective Courses

Select an additional 12 credits from the following HLT courses:

HLT 131	Sustainable Horticulture	3
HLT 230	Landscape Design II	3
HLT 236	Landscape Construction	4
HLT 237	Landscape Bidding and Estimating	2
HLT 250	Irrigation III: Design	2

Total Credit Hours: 27

Computer Information Systems - Associate of Applied Science Pathways

This program is designed to prepare students for employment in the computer information field. Although the courses are not intended for transfer, some courses may transfer. Course transferability should be confirmed with the receiving institution.

The computer information systems program offers AAS degree pathways in multiple disciplines. Students may pursue programming, web development, database administration or in consultation with a CIS program advisor, develop a customized degree that is more related to the student's employment plans.

Students entering the degree and certificate programs should have adequate skills in keyboarding, internet, mathematics, oral and written communications, and the ability to read at an appropriate technical level.

Please note that Credit by Examination and CLEP tests are available for some required and elective courses. Please see a CIS advisor to determine the availability of such exams.

All courses applied to AAS degrees and certificates must be completed with a grade of "C" or above.

Assessment testing is required for all students. Students who place into CCR 093 or above and MAT 055 or above, or receive appropriate assessment scores and currently enrolled in a math course may begin this program of study.

Computer Information Systems - Associate of Applied Science Degree Pathways

COMPUTER INFORMATION SYSTEMS

Field Code: F_AAS_CISS

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

In consultation with a CIS program advisor, the student may develop an Individualized Computer Information Systems Associate of Applied Science degree that is customized to relate to the student's employment or skill development. It should be noted that required major and general education courses of the program are not subject to change.

REQUIREMENTS

Required Courses

CIS 118	Introduction to PC Applications	3
CIS 223	Linux	3

Subtotal: 6

CNG 201 Linux Configuration may substitute for CIS 223 Linux. CIS 128 may be applied as an elective for this award. Westminster students may substitute CIS 128 for CIS 223 by obtaining a signed course substitution form. Please see program director for details.

Additional Requirements

Select 26 credits from the following prefixes: CIS, CNG, CSC or CWB

Select an additional 12 credits of electives from the following prefixes: ACC, BUS, CIS, CNG, CSC, CWB, MAN, MAR, MGD or MAT 201 or higher

Subtotal: 38

Required General Education Courses

ENG 121	English Composition I	3
	or	
ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences Elective	3
	Social and Behavioral Science Elective	3

Subtotal: 16

Arts and Humanities, Natural & Physical Sciences, Social and Behavioral Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60

DATABASE ADMINISTRATION

Field Code: F_AAS_CIS9

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This AAS degree pathway is designed to prepare students for entry-level employment working with databases. The student will be introduced to several different databases and complementary office skills.

Program applicants must demonstrate course proficiency or course completion of CIS 128 Windows Complete.

REQUIREMENTS

Students are strongly advised to meet with the program director before starting this degree pathway.

Required Courses

CIS 118	Introduction to PC Applications	3
CIS 223	Linux	3

Subtotal: 6

CNG 201 Linux Configuration may substitute for CIS 223 Linux. CIS 128 may be applied as an elective for this award. Westminster students may substitute CIS 128 for CIS 223 by obtaining a signed course substitution form. Please see program director for details.

Additional Requirements

Complete the 21 credits below:

BUS 217	Business Communication and Report Writing	3
CIS 115	Introduction to Computer Information Systems	3
CIS 145	Complete PC Database: ACCESS	3
CIS 240	Database Design and Development	3
CIS 243	Introduction to SQL	3
CSC 220	Intro to Microsoft Visual Basic.NET	3
CSC 252	Database Program/Visual Basic	3

Select 12 credits from the following:

CIS 155	PC Spreadsheet Concepts: Excel	3
CIS 268	Systems Analysis and Design I	3
CIS 280	Internship	1-12
CNG 132	Network Security Fundamentals	3

Select an additional 5 credits from any of the following prefixes: ACC, BUS, CIS, CNG, CSC, CWB, MAR or MAN.

Subtotal: 38

CIS 254 Oracle Forms and CIS 256 Oracle Reports may be used to satisfy the 12 credits of additional requirements listed above.

Required General Education Courses

ENG 121	English Composition I or	3
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ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences Elective	3
	Social and Behavioral Science Elective	3

Subtotal: 16

Arts and Humanities, Natural & Physical Sciences, Social and Behavioral Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60

PROGRAMMING

Field Code: F_AAS_CPGM

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This AAS degree pathway is designed to prepare students for entry-level employment in computer programming. This pathway contains many courses that transfer to a Bachelor's degree in programming/Computer Science. See a CIS program adviser for more information about what transfers, it could be a combination of computer information systems as well as computer science courses.

REQUIREMENTS

Students are strongly advised to meet with the program director before starting this degree pathway.

Required Courses

CIS 118	Introduction to PC Applications	3
CIS 223	Linux	3

Subtotal: 6

CNG 201 Linux Configuration may substitute for CIS 223 Linux. CIS 128 may be applied as an elective for this award. Westminster students may substitute CIS 128 for CIS 223 by obtaining a signed course substitution form. Please see program director for details.

Additional Requirements

Complete the 11 credits below:

CIS 145	Complete PC Database: ACCESS	3
CSC 160	Computer Science I: (C++)	4
CSC 161	Computer Science II	4

Select 18 credits from the following

MAT 201	Calculus I	5
MAT 202	Calculus II	5
	or	
	Any CSC prefix courses	

Select 9 credits from the following

Any CIS, CNG, CSC, CWB or MAT 203 or higher

Subtotal: 38

Required General Education Courses

ENG 121	English Composition I	3
	or	
ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences Elective	3
	Social and Behavioral Science Elective	3

Subtotal: 16

Arts and Humanities, Natural & Physical Sciences, Social and Behavioral Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60**WEB DEVELOPER**

Field Code: F_AAS_DVL

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This degree is designed to prepare students for entry-level employment in Web Development. Its primary focus is on the integration of all the components of a web page and includes some designing of web pages.

REQUIREMENTS

Students are strongly advised to meet with the program director before starting this degree pathway to obtain proper advisement and sequencing of courses.

Required Courses

CIS 118	Introduction to PC Applications	3
CIS 223	Linux	3

Subtotal: 6

CNG 201 Linux Configuration may substitute for CIS 223 Linux. CIS 128 may be applied as an elective for this award. Westminster students may substitute CIS 128 for CIS 223 by obtaining a signed course substitution form. Please see program director for details.

Additional Requirements

Complete 27 credits of required coursework listed below:

CIS 145	Complete PC Database: ACCESS	3
CIS 243	Introduction to SQL	3
CSC 119	Introduction to Programming	3
CWB 110	Complete Web Authoring	3
CWB 205	Client-Side Scripting: (Software)	3
CWB 208	Web Application Development: PHP	3
MGD 111	Adobe Photoshop I	3
	or	
MGD 112	Adobe Illustrator I	3
MGD 141	Web Design I	3
	or	
CWB 130	Web Editing Tools: (Editor)	3
CSC 240	Java Programming	3

or

CSC 233	Object-oriented Programming (Lang)	3
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Select 6 credits from the following:

MGD 143	Motion Graphic Design I	3
MGD 241	Web Design II	3
MGD 243	Web Motion Graphic Design II	3

Select 5 credits from any CWB, MGD, CIS, CSC or CNG courses

Subtotal: 38**Required General Education Courses**

ENG 121	English Composition I	3
	or	
ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences Elective	3
	Social and Behavioral Science Elective	3

Subtotal: 16

Arts and Humanities, Natural & Physical Sciences, Social and Behavioral Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60**Computer Information Systems - Certificates****APPLICATIONS SPECIALIST**

Field Code: F_CER_APSC

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This certificate is designed to prepare students for entry-level employment positions in a business environment using most major types of business applications: word processing, spreadsheets, databases, and presentation graphics.

REQUIREMENTS

All certificate courses must be completed with a grade of "C" or above.

Required Courses

Students that can demonstrate course proficiency of CIS 118 Introduction to PC Applications are advised to meet with a CIS program director or advisor to select an ADVANCED application course in Computer Information Systems, Business or Accounting that can substitute for CIS 118.

CIS 118	Introduction to PC Applications	3
	or	
	an advanced application course approved by the CIS department	
CIS 135	Complete PC Word Processing: Word	3
CIS 145	Complete PC Database: ACCESS	3
CIS 155	PC Spreadsheet Concepts: Excel	3

Total Credit Hours: 12**PROGRAMMING**

Field Code: F_CER_CTPA

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This certificate is designed to prepare students for the application of selected programming languages that include courses in a combination of computer information systems as well as computer science.

REQUIREMENTS

Students are strongly advised to meet with the program director before starting this degree pathway.

All certificate courses must be completed with a grade of "C" or above.

Required Courses

CIS 145	Complete PC Database: ACCESS	3
CSC 160	Computer Science I: (C++)	4
CSC 161	Computer Science II	4
Subtotal: 11		

Additional Required Courses

Select 9 credits from any CSC course.

Subtotal: 9

Subtotal: 20

Total Credit Hours: 20**WEB DEVELOPER**

Field Code: F_CER_CSWB

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This certificate is designed to prepare students for entry-level employment in Web Development. It's primary focus is on the integration of all the components of a web page and includes some designing of web pages.

REQUIREMENTS

Students are strongly advised to meet with the program director before starting this certificate to obtain proper advisement and sequencing of courses.

Certificate applicants must demonstrate course proficiency or course completion of CIS 118 Introduction to PC Applications.

Required Courses

CIS 145	Complete PC Database: ACCESS	3
CIS 243	Introduction to SQL	3
CSC 119	Introduction to Programming	3
CWB 110	Complete Web Authoring	3
CWB 205	Client-Side Scripting: (Software)	3
CWB 208	Web Application Development: PHP	3
MGD 111	Adobe Photoshop I	3
	or	
MGD 112	Adobe Illustrator I	3
MGD 141	Web Design I	3

or

CWB 130 Web Editing Tools: (Editor) 3

Total Credit Hours: 24**Computer Networking, Virtualization and Cybersecurity**

This program is designed to prepare students for employment in fields of computer networking administration, cloud computing and virtualization, and cybersecurity. Although the courses are not intended for transfer, some courses may transfer. Course transferability should be confirmed with the receiving institution.

The computer networking, virtualization and cybersecurity program offers AAS degree pathways in multiple disciplines. Students will learn about network infrastructure, network administration, cloud computing and virtualization, and cybersecurity. Students will choose the degree track with the specialty they wish to pursue.

Students entering the degree and certificate programs should have adequate skills in mathematics, oral and written communications, and the ability to read at an appropriate technical level.

Please note that Credit by Examination and CLEP tests are available for a few required and elective courses. Please see a CNG/CIS advisor to determine the availability of such exams.

All courses applied to AAS degrees and certificates must be completed with a grade of "C" or above.

Assessment testing is required for all students. Students who place into CCR 093 or above and MAT 055 or above, and currently enrolled in a math course may begin this program of study.

Computer Networking, Virtualization and Cybersecurity - Associate of Applied Science Degree Pathways**CYBERSECURITY**

Field Code: F_AAS_CIAE

Campus: Larimer Campus, Westminster Campus

This AAS degree pathway is designed to introduce students to a comprehensive overview of network security, including general security concepts. Communication security is studied, including remote access, e-mail, the web, directory and file transfer, and wireless data. Common network attacks and Computer forensics are discussed. Cryptography basics are incorporated, and operational/organizational security is discussed as it relates to physical security, disaster recovery, and business continuity.

REQUIREMENTS

Students must demonstrate course proficiency or course completion of CNG 120 A+ Certification Preparation or both CNG 121 Computer Technician I: A+ and CNG 122 Computer Technician II: A+ or permission of program director.

Students are strongly advised to meet with the program director before starting this degree pathway.

Required Courses

CIS 118	Introduction to PC Applications	3
CIS 223	Linux	3

CNG 101	Networking Fundamentals or	3
CNG 124	Networking I: Network +	3
CNG 132	Network Security Fundamentals	3
CNG 133	Firewalls/Network Security	3
CNG 142	Intro to Cloud Computing Concepts	3
CNG 259	Enterprise Security	4

Subtotal: 22

CNG 201 Linux Configuration may substitute for CIS 223 Linux. CIS 128 may be applied as an elective for this award. Westminster students may substitute CIS 128 for CIS 223 by obtaining a signed course substitution form. Please see program director for details.

Additional Required Courses

Select 12 credits from below:

CNG 125	Networking II: Network +	3
CNG 131	Principles of Information Assurance	3
CNG 136	Guide to IT Disaster Recovery	3
CNG 240	Virtual Environment Admin	3
CNG 241	Information Storage and Management	3
CNG 243	Cloud Security and Cyber Law	3
CNG 251	Anti Virus Concepts	3
CNG 254	Data Encryption	3
CNG 257	Network Defense & Counter Measures	3
CNG 258	Digital forensics	4
CNG 280	Internship	3

Select 10 credits from below:

10 credits of any CIS, CNG, and CSC courses

Subtotal: 22**Required General Education Courses**

ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences Elective	3
	Social and Behavioral Science Elective	3

Subtotal: 16

Arts and Humanities, Natural & Physical Sciences, Social and Behavioral Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60**CLOUD COMPUTING AND VIRTUALIZATION**

Field Code: F_AAS_CLCI

Campus: Larimer Campus, Westminster Campus

This AAS degree pathway is designed to introduce students to virtualization and cloud technologies. Students study technology

that is being broadly adopted and implemented by many organizations of all types and sizes. The courses are designed to provide students with the technical skills required to install, configure and/or manage many facets of a "cloud" infrastructure.

REQUIREMENTS

Students must demonstrate course proficiency or course completion of CNG 120 A+ Certification Preparation or both CNG 121 Computer Technician I: A+ and CNG 122 Computer Technician II: A+ or permission of program director.

Students are strongly advised to meet with the program director before starting this degree pathway.

Required Courses

CIS 118	Introduction to PC Applications	3
CIS 223	Linux	3
CNG 101	Networking Fundamentals or	3
CNG 124	Networking I: Network +	3
CNG 132	Network Security Fundamentals	3
CNG 142	Intro to Cloud Computing Concepts	3
CNG 240	Virtual Environment Admin or	3
CNG 242	Cloud Computing	3
CNG 241	Information Storage and Management	3
CNG 243	Cloud Security and Cyber Law	3

Subtotal: 24

CNG 201 Linux Configuration may substitute for CIS 223 Linux. CIS 128 may be applied as an elective for this award. Westminster students may substitute CIS 128 for CIS 223 by obtaining a signed course substitution form. Please see program director for details.

Additional Required Courses

Select 20 credits from below:

12 credits of any CNG courses
and
8 credits of any CIS, CNG, CSC or CWB
courses

Subtotal: 20**Required General Education Courses**

ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences Elective	3
	Social and Behavioral Science Elective	3

Subtotal: 16

Arts and Humanities, Natural & Physical Sciences, Social and Behavioral Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60**NETWORK ADMINISTRATION**

Field Code: F_AAS_CMFA

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This AAS degree pathway is designed to prepare students for positions in network administration. This pathway introduces students to the concepts of installing, configuring, and managing multiple operating systems and provides students with the knowledge and skills to configure, administer and secure data, users, and services using multiple servers. Students completing this training will be prepared for multiple industry certifications such as the core Microsoft Certified Professional examinations.

REQUIREMENTS

Students are strongly advised to meet with the program director before starting this degree pathway.

Required Courses

CIS 118	Introduction to PC Applications	3
CIS 223	Linux	3
CNG 132	Network Security Fundamentals	3
CNG 211	Windows Configuration	3
CNG 212	Configuring Windows Server	4

Subtotal: 16

CNG 201 Linux Configuration may substitute for CIS 223 Linux. CIS 128 may be applied as an elective for this award. Westminster students may substitute CIS 128 for CIS 223 by obtaining a signed course substitution form. Please see program director for details.

Additional Required Courses

Select 6 credits from below:

CNG 124	Networking I: Network + and	3
CNG 125	Networking II: Network + or	3
CNG 101	Networking Fundamentals and	3
	3 credits of CNG electives	3

Select 8 credits from below:

CNG 121	Computer Technician I: A+ and	4
CNG 122	Computer Technician II: A+ or	4
CNG 120	A+ Certification Preparation and	4
	4 credits of CNG electives	4

Select 14 credits from below:

9 credits of any CNG courses and
5 credits from any CIS, CNG, CSC or
CWB courses

Subtotal: 28**Required General Education Courses**

ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3

MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences	3
	Elective	
	Social and Behavioral Science	3
	Elective	

Subtotal: 16

Arts and Humanities, Natural & Physical Sciences, Social and Behavioral Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60**NETWORK INFRASTRUCTURE**

Field Code: F_AAS_CNW1

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This AAS degree pathway is designed to prepare students for careers installing, configuring and troubleshooting networking hardware such as wireless equipment, switches and routers. Students will be exposed to equipment from multiple networking vendors. Upon successful completion, the program graduate is qualified to take multiple industry certification exams such as the CISCO Certified Network Associate, CompTIA A+, and CompTIA Network+ examinations.

REQUIREMENTS

Students are strongly advised to meet with the program director before starting this degree pathway.

Students must demonstrate course proficiency or course completion of CNG 120 A+ Certification Preparation or both CNG 121 Computer technician I: A+ and CNG 122 Computer Technician II: A+ or permission of program director.

Required Courses

CIS 118	Introduction to PC Applications	3
CIS 223	Linux	3
CNG 132	Network Security Fundamentals	3

Subtotal: 9

CNG 201 Linux Configuration may substitute for CIS 223 Linux. CIS 128 may be applied as an elective for this award. Westminster students may substitute CIS 128 for CIS 223 by obtaining a signed course substitution form. Please see program director for details.

Additional Required Courses

Select 6 credits from below:

CNG 124	Networking I: Network + and	3
CNG 125	Networking II: Network + or	3
CNG 101	Networking Fundamentals and	3
	3 credits of CNG electives	3

Select 8 credits from below:

CNG 121	Computer Technician I: A+ and	4
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CNG 122	Computer Technician II: A+ or	4
CNG 120	A+ Certification Preparation and 4 credits of CNG electives	4
Select 9-10 credits from below:		
CNG 230	Fast Track CCNA 1 and 2	5
CNG 231	Fast Track CCNA 3 and 4	5
or		
CNG 129	Wireless LAN Fundamentals	3
CNG 232	Managing LAN Switches	3
CNG 233	Routers and Routing Protocols	3

Select 11-12 credits from below:

6 credits of any CNG courses
and
5-6 credits from any CIS, CNG, CSC or
CWB courses

Subtotal: 35**Required General Education Courses**

ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 121	College Algebra	4
	Arts and Humanities Elective	3
	Natural and Physical Sciences Elective	3
	Social and Behavioral Science Elective	3

Subtotal: 16

Arts and Humanities, Natural & Physical Sciences, Social and Behavioral Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60**Computer Networking, Virtualization and Cybersecurity - Certificates****CYBERSECURITY**

Field Code: F_CER_CYB

Campus: Larimer Campus, Westminster Campus

This certificate is designed to prepare students for entry-level employment and to give working professionals advancement opportunities in the computer networking field. Successfully acquiring a FRCC Cybersecurity Certificate signifies that a student has had an overview of network security. Communication Security is studied, including remote access, email, the web, directory and file transfer, and wireless data. Common network attacks and Computer forensics are introduced. Cryptography basics are incorporated, and operational/organizational security is discussed as it relates to physical security, disaster recovery, and business continuity.

REQUIREMENTS

Students should talk to the program director before starting this certificate.

Students must demonstrate course proficiency or course completion of CNG 120 A+ Certification Preparation or both CNG 121 Computer Technician I: A+ and CNG 122 Computer Technician II: A+ or permission of program director.

All certificate courses must be completed with a grade of "C" or above.

Required Courses

CNG 101	Networking Fundamentals	3
or		
CNG 124	Networking I: Network +	3
CNG 132	Network Security Fundamentals	3
CNG 133	Firewalls/Network Security	3
Select 3 credits from the following:		
CNG 142	Intro to Cloud Computing Concepts	3
CNG 251	Anti Virus Concepts	3
CNG 254	Data Encryption	3
CNG 257	Network Defense & Counter Measures	3
CNG 258	Digital forensics	4
CNG 259	Enterprise Security	4

Total Credit Hours: 12**CLOUD COMPUTING AND VIRTUALIZATION**

Field Code: F_CER_CLCO

Campus: Larimer Campus, Westminster Campus

This certificate is designed to prepare students for entry-level employment. It will offer students an opportunity to study technology that is being broadly adopted and implemented by many organizations of all types and sizes. The courses are designed to provide students with the technical skills required to install, configure and/or manage many facets of a "cloud" infrastructure.

REQUIREMENTS**Required Courses**

CNG 101	Networking Fundamentals	3
or		
CNG 124	Networking I: Network +	3
CNG 142	Intro to Cloud Computing Concepts	3
CNG 240	Virtual Environment Admin	3
or		
CNG 242	Cloud Computing	3
CNG 241	Information Storage and Management	3
or		
CNG 243	Cloud Security and Cyber Law	3

Total Credit Hours: 12**MICROSOFT SERVER ADMINISTRATION**

Field Code: F_CER_MSSA

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This certificate is designed to prepare students for positions in network administration. This pathway introduces students to the concepts of installing, configuring, and managing multiple operating systems and provides students with the knowledge and skills to configure, administer and secure data, users, and services using multiple servers. Students completing this training will be prepared for multiple industry certifications such as the core Microsoft Certified Professional examinations.

REQUIREMENTS

Students should talk to the program director before starting this certificate.

Students must have completed the certificate of Network Basics or demonstrate proficiency and receive permission from the program director.

All certificate courses must be completed with a grade of "C" or above.

Required Courses

Select three of the following courses:

CNG 212	Configuring Windows Server	4
CNG 213	Administering Windows Server	4
CNG 214	Adv Windows Server Admin	4
CNG 215	Windows Automation	3

Total Credit Hours: 11-12

LINUX SERVER ADMINISTRATION

Field Code: F_CER_LINX

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This certificate introduces students to the concepts of installing, configuring, and managing the Linux operating system and provides students with the knowledge and skills to configure, administer and secure data, users, and services in a Linux server.

REQUIREMENTS

Students should talk to the program director before starting this certificate.

Students must demonstrate course proficiency or course completion of CNG 120 A+ Certification Preparation or both CNG 121 Computer Technician I: A+ and CNG 122 Computer Technician II: A+ or permission of program director.

All certificate courses must be completed with a grade of "C" or above.

Required Courses

CNG 201	Linux Configuration: (OS)	3
CNG 202	Unix/Linux Server Administration	3

Select one of the following courses:

CNG 203	Advanced Linux Server Administration	3
CNG 133	Firewalls/Network Security	3
CNG 240	Virtual Environment Admin	3
CNG 241	Information Storage and Management	3

CNG 258	Digital forensics	4
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CIS 222 UNIX System Administration may substitute for CNG 202 Linux Server Admin. CIS 223 Linux may substitute for CNG 201 Linux Configuration.

Total Credit Hours: 9

NETWORK TECHNICIAN

Field Code: F_CER_CNWB

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This certificate provides students the basic concepts and skills needed as a network technician. Some classes are generic to any network environment, other classes concentrate on a Microsoft System. Students completing this training will be prepared for the industry certifications, such as the Microsoft Technology Associate (MTA).

REQUIREMENTS

Students should talk to the program director before starting this certificate.

All certificate courses must be completed with a grade of "C" or above.

Required Courses

CNG 101	Networking Fundamentals	3
	or	
CNG 124	Networking I: Network +	3
CNG 132	Network Security Fundamentals	3
CNG 211	Windows Configuration	3
CNG 212	Configuring Windows Server	4

Total Credit Hours: 13

NETWORK INFRASTRUCTURE

Field Code: F_CER_CNW2

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This certificate is designed to prepare students for careers installing, configuring and troubleshooting networking hardware such as wireless equipment, switches and routers. Students will be exposed to equipment from multiple networking vendors. Upon successful completion, the program graduate is capable of taking the entry level CISCO Certifications.

REQUIREMENTS

All certificate courses must be completed with a grade of "C" or above.

Required Courses

CNG 230	Fast Track CCNA 1 and 2	5
CNG 231	Fast Track CCNA 3 and 4	5

or

CNG 129	Wireless LAN Fundamentals	3
CNG 232	Managing LAN Switches	3
CNG 233	Routers and Routing Protocols	3

Total Credit Hours: 9-10

NETWORKING BASICS

Field Code: F_CER_CNB1

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

This certificate is designed to prepare students for entry-level employment. It will offer students an opportunity to study basic networking technology commonly found in network help-desk positions. Upon successful completion, the program graduate is trained in the competencies found in multiple industry certification exams including CompTIA A+ and CompTIA Networking+, MTA Security Fundamentals and MTA Networking Fundamentals certification exams.

REQUIREMENTS

Students should talk to the program director before starting this certificate.

Required Courses

CNG 121	Computer Technician I: A+	4
CNG 122	Computer Technician II: A+	4
CNG 124	Networking I: Network +	3
CNG 125	Networking II: Network +	3

or

CNG 101	Networking Fundamentals	3
CNG 120	A+ Certification Preparation	4
CNG 132	Network Security Fundamentals	3

CNG 120 A+ Certification Preparation may substitute for CNG 121 Computer Technician I: A+ and CNG 122 Computer Technician II: A+

Total Credit Hours: 10-14

COMPUTER TECHNICIAN: NETWORK +

Field Code: F_CER_CTNT

Campus: Boulder County Campus, Westminster Campus

This certificate is designed to prepare students for entry-level employment in the computer networking field and for competencies included in the CompTIA Networking+ certification exam.

REQUIREMENTS

Required Courses

CNG 124	Networking I: Network +	3
CNG 125	Networking II: Network +	3

Total Credit Hours: 6

Dental Assisting

DENTAL ASSISTING - CERTIFICATE

Field Code: F_CER_DEA1

Campus: Larimer Campus

This certificate program offers a challenging career in the rapidly growing field of dental assisting. In addition to assisting dentists in all phases of dental treatment, dental assistants are valuable

members of the dental team with skills in office management, clinical assisting, laboratory procedures, dental radiography, and infection control.

The Front Range Dental Clinic, staffed by licensed dentists, provides a portion of the clinical experience, as well as an internship feature of the program. Each student must take three sequential clinical courses, without a semester break between the experiences. If for some reason the student must miss a semester of clinicals, the student will need to repeat the prior clinical experiences. These clinical hours exceed the required the 300 clock hours of the American Dental Association.

In order to graduate, a grade of "C" or better is required to all courses to receive a certificate. Completion of radiology courses qualifies students to take radiographs in the State of Colorado.

Students must submit to a criminal background check and drug screening prior to entering their Clinical Internship I. Students are responsible for the cost of these tests.

The Commission on Dental Accreditation of the American Dental Association accredits the program, a special accrediting body recognized by the Council on Postsecondary Accreditation and by the U.S. Department of Education. Graduates are eligible for the Dental Assisting National Board Examination. Students must have a high school diploma or GED.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Required Courses

DEA 102	Principles of Clinical Practice	3
DEA 104	Specialties in Dentistry	2
DEA 111	Dental Office Management	2
DEA 120	Introduction to Dental Practices	1
DEA 121	Dental Science I	3
DEA 122	Dental Science II	3
DEA 123	Dental Materials I	3
DEA 124	Dental Materials II	3
DEA 125	Dental Radiography	3
DEA 126	Infection Control	3
DEA 131	Dental Radiography II	3
DEA 132	Medical Emergencies in the Dental office	2
DEA 134	Prevention and Nutrition in Dentistry	3
DEA 181	Clinical Internship I	1
DEA 182	Clinical Internship II and Seminar	6
DEA 183	Clinical Internship III	2
	General Studies Elective	3

General Studies Elective: Electives must be selected from the Approved General Education Electives List for the AAS degree.

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For

more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 46

Early Childhood Education

EARLY CHILDHOOD EDUCATION - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_ECE

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This program provides training for those who want to pursue a career involving the care and education of young children from birth through age eight. Courses in theory and internship are combined to provide a comprehensive base of growth and development. Early intervention, high-risk, gifted, and developmentally delayed issues are included. The program meets or exceeds all Colorado Department of Human Services Office of Early Childhood licensing requirements. Those working with very young children need to be in good health and able to lift and carry young children comfortably.

REQUIREMENTS

Students must earn a grade of "C" or above in all required courses applied to a certificate or degree.

Assessment testing is required for all students. Students who place into CCR 093 or above and MAT 050 or above may begin coursework for the Early Childhood Education AAS and AA degrees. Students who place into CCR 093 or above may begin coursework for the Early Childhood Education Certificates. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Students enrolling in ECE 102, ECE 112, ECE 124, ECE 180, ECE 188, ECE 280, and ECE 288 must pass a criminal background check before they are allowed to start their practicum hours with children. Contact your home campus ECE Program Director if you are enrolling in an on-campus section of a practicum course or the FRCC – ECE Online Lead if you are enrolling in an online section of a practicum course for information on how to complete the background check process.

Required Courses

ECE 101	Introduction to Early Childhood Education	3
ECE 102	Introduction to Early Childhood Lab Techniques	3
ECE 103	Guidance Strategies for Children	3
ECE 111	Infant and Toddler theory and Practice	3
ECE 188	Practicum	4*
ECE 205	Nutrition, Health and Safety	3
ECE 220	Curriculum Development: Methods and Techniques	3
ECE 236	Child Growth/Development Laboratory	1
ECE 238	Child Growth and Development	3
ECE 240	Administration of Early Childhood Care and Education Programs	3

ECE 241	Administration: Human Relations for Early Childhood Education	3
ECE 256	Working with Parents and Families	3
ECE 260	Exceptional Child	3
ECE 288	Practicum: Early childhood Education	4
	ECE Electives (any 3 ECE credits)	3

Subtotal: 45

*Students may complete ECE 188 for 4 credits to complete the AAS degree requirement or for 1 credit to complete the AA degree requirement.

Required General Education Courses

COM 115	Public Speaking	3
ENG 121	English Composition I	3
MAT 107	Career Mathematics	3
	or above	

Subtotal: 9

If students are pursuing both the AAS and the AA in ECE please consult with a program advisor before completing the mathematics requirement.

Arts and Humanities (select one)

ART 110	Art Appreciation	3
LIT 115	Introduction to Literature I	3
LIT 255	Children's Literature	3
MUS 120	Music Appreciation	3

Subtotal: 3

Social and Behavioral Sciences (select one)

GEO 105	World Regional Geography	3
HIS 121	U.S. History to Reconstruction	3
POS 111	American Government	3

Subtotal: 3

Colorado Child Care Licensing Requirements

Many positions in Colorado early childhood programs require employees to meet, at minimum, the Colorado Department of Human Services Office of Early Childhood requirements for Early Childhood Teacher (ECT). ECT and Director qualified requirements include a combination of verifiable experience and post-secondary education. Please contact the Colorado Department of Human Services Office of Early Childhood to determine which requirements you need.

Contact an ECE faculty advisor for additional information concerning the course requirements.

GAINFUL EMPLOYMENT DISCLOSURE INFORMATION

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 60

Early Childhood Education - Certificates

EARLY CHILDHOOD DIRECTOR

Field Code: F_CER_DIRE

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

REQUIREMENTS**Required Courses**

ECE 101	Introduction to Early Childhood Education	3
ECE 102	Introduction to Early Childhood Lab Techniques	3
ECE 103	Guidance Strategies for Children	3
ECE 111	Infant and Toddler theory and Practice	3
ECE 205	Nutrition, Health and Safety	3
ECE 220	Curriculum Development: Methods and Techniques	3
ECE 236	Child Growth/Development Laboratory	1
ECE 238	Child Growth and Development	3
ECE 240	Administration of Early Childhood Care and Education Programs	3
ECE 241	Administration: Human Relations for Early Childhood Education	3
ECE 260	Exceptional Child	3

Students enrolling in ECE 102 must pass a criminal background check before they are allowed to start their practicum hours with children. Contact your home campus ECE Program Director if you are enrolling in an on-campus section of a practicum course or the FRCC – ECE Online Lead if you are enrolling in an online section of a practicum course for information on how to complete the background check process.

Note: Many positions in Colorado early childhood programs require employees to meet, at minimum, the Colorado Department of Human Services Office of Early Childhood requirements for Early Childhood Teacher (ECT). ECT and Director qualified requirements include a combination of verifiable experience and post-secondary education. Please contact the Colorado Department of Human Services Office of Early Childhood to determine which requirements you need. Students who place into CCR 093 or above may begin the coursework for this certificate. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Total Credit Hours: 31**EARLY CHILDHOOD EDUCATION FOR
PARAEDUCATORS**

Field Code: F_CER_LT

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This certificate has been developed as an open-entry/open-exit program for those currently employed or those seeking employment to work with developmentally delayed infants, toddlers, preschool, and school-age children in inclusive settings.

The coursework in this certificate provides students with the wide range of knowledge and skills including a solid foundation in the normal patterns of growth and development, various disabilities, giftedness, developmentally appropriate teaching

techniques, and learning styles of children with developmental delays. These skills prepare paraprofessionals to be effective team members.

REQUIREMENTS**Required Courses**

ECE 101	Introduction to Early Childhood Education	3
ECE 102	Introduction to Early Childhood Lab Techniques	3
ECE 103	Guidance Strategies for Children	3
ECE 157	Family Dynamics	1
ECE 161	the Team Process	1
ECE 220	Curriculum Development: Methods and Techniques	3
ECE 236	Child Growth/Development Laboratory	1
ECE 238	Child Growth and Development	3
ECE 260	Exceptional Child	3

Students enrolling in ECE 102 must pass a criminal background check before they are allowed to start their practicum hours with children. Contact your home campus ECE Program Director if you are enrolling in an on-campus section of a practicum course or the FRCC – ECE Online Lead if you are enrolling in an online section of a practicum course for information on how to complete the background check process.

Note: Students who place into CCR 093 or above may begin the coursework for this certificate. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Total Credit Hours: 21**FOUNDATIONS OF EARLY CHILDHOOD
EDUCATION**

Field Code: F_CER_EC5

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

REQUIREMENTS**Required Courses**

ECE 101	Introduction to Early Childhood Education	3
ECE 102	Introduction to Early Childhood Lab Techniques	3
ECE 103	Guidance Strategies for Children	3
ECE 220	Curriculum Development: Methods and Techniques	3
ECE 236	Child Growth/Development Laboratory	1
ECE 238	Child Growth and Development	3

Students enrolling in ECE 102 must pass a criminal background check before they are allowed to start their practicum hours with children. Contact your home campus ECE Program Director if you are enrolling in an on-campus section of a practicum course or the FRCC – ECE Online Lead if you are enrolling in an online section of a practicum course for information on how to complete the background check process.

Note:

Many positions in Colorado early childhood programs require employees to meet, at minimum, the Colorado Department of Human Services Office of Early Childhood requirements for Early Childhood Teacher (ECT). ECT and Director qualified requirements include a combination of verifiable experience and post-secondary education. Please contact the Colorado Department of Human Services Office of Early Childhood to determine which requirements you need. Students who place into CCR 093 or above may begin the coursework for this certificate. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Total Credit Hours: 16

INFANT-TODDLER NURSERY SUPERVISOR

Field Code: F_CER_ECI1

Campus: Boulder County Campus, Larimer Campus, Westminster Campus, Online Learning

This certificate provides students with a solid foundation in the growth and development of infants and toddlers, plus advanced exposure in developing and implementing appropriate nurturing and developmental experiences. Working closely with parents is incorporated, as well as the issues of early intervention, high risk, and developmental delays. This certificate meets the State of Colorado requirements for Infant-Toddler Nursery Supervisor.

REQUIREMENTS

Required Courses

ECE 111	Infant and Toddler theory and Practice	3
ECE 112	Introduction to Infant/Toddler/Lab Tech	3
ECE 256	Working with Parents and Families	3
ECE 260	Exceptional Child	3
HWE 141	Infant Nutrition	1

Students enrolling in ECE 112 must pass a criminal background check before they are allowed to start their practicum hours with children. Contact your home campus ECE Program Director if you are enrolling in an on-campus section of a practicum course or the FRCC – ECE Online Lead if you are enrolling in an online section of a practicum course for information on how to complete the background check process.

Note: The prerequisite for ECE 260 is ECE 238. For this certificate only ECE 111 will substitute for ECE 238. Students who place into CCR 093 or above may begin the coursework for this certificate. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Total Credit Hours: 13

EARLY CHILDHOOD EDUCATION FOR TRANSFER - ASSOCIATE OF ARTS DEGREE

Field Code: F_AA_AA, ECET

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

Assessment testing is required for all students. Students who place into CCR 093 or above and MAT 050 or above may begin coursework for the Early Childhood Education AAS and AA degrees. Students who place into CCR 093 or above may begin coursework for the Early Childhood Education Certificates. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

This degree prepares students for transfer into the area of early childhood education at a four-year college or university. Students should consult with a program advisor to select electives appropriate to the institution to which they intend to transfer.

REQUIREMENTS

Students enrolling in ECE 102, ECE 112, ECE 124, ECE 180, ECE 188, ECE 280, and ECE 288 must pass a criminal background check before they are allowed to start their practicum hours with children. Contact your home campus ECE Program Director if you are enrolling in an on-campus section of a practicum course or the FRCC – ECE Online Lead if you are enrolling in an online section of a practicum course for information on how to complete the background check process.

Required Courses

ECE 101	Introduction to Early Childhood Education	3
ECE 102	Introduction to Early Childhood Lab Techniques	3
ECE 205	Nutrition, Health and Safety	3
ECE 238	Child Growth and Development	3
ECE 188	Practicum or	4*
ECE 209	Observing Young Children or	1
ECE 236	Child Growth/Development Laboratory	1
ECE 241	Administration: Human Relations for Early Childhood Education	3
COM 115	Public Speaking	3
	Electives: Select in consultation with program advisor	6

Subtotal: 25

*Students may complete ECE 188 for 4 credits to complete the AAS degree requirement or for 1 credit to complete the AA degree requirement.

COM 115: grade of "B" or above is required for degree

Communications

ENG 121	English Composition I	3
ENG 122	English Composition II	3

Subtotal: 6

Mathematics (select one of the following tracks)

Track 1:

MAT 120	Mathematics for the Liberal Arts or	4
MAT 121	College Algebra	4

MAT 135	Introduction to Statistics	3
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Track 2:

MAT 155	Integrated Mathematics I	3
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MAT 156	Integrated Mathematics II	3
		Subtotal: 6-7

Note: MAT 155 and MAT 156 may not apply to other Associate degrees. Please confirm with an Academic Advisor. Students planning to transfer to CSU should complete Track 1: MAT 120 or MAT 121 and MAT 135

Arts and Humanities (select any two of the following):

ART 110	Art Appreciation	3
MUS 120	Music Appreciation	3
LIT 115	Introduction to Literature I	3
LIT 255	Children's Literature	3
		Subtotal: 6

Natural and Physical Sciences

SCI 155	Integrated Science I with Lab	4
SCI 156	Integrated Science II with Lab	4
		Subtotal: 8

Social and Behavioral Sciences

GEO 105	World Regional Geography	3
HIS 121	U.S. History to Reconstruction	3
POS 111	American Government	3
		Subtotal: 9

Total Credit Hours: 60

Elementary Education

ELEMENTARY EDUCATION FOR TRANSFER - ASSOCIATE OF ARTS DEGREE

Field Code: F_AA_AA, EEDT

Campus: Boulder County Campus, Larimer Campus, Westminster Campus

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

This degree is designed to provide students with the first two years of a baccalaureate degree in elementary education. The degree requirements are based upon a statewide articulation agreement with the teacher education programs in Colorado. Students should consult with a program advisor to select courses based upon the requirements of the institution to which the student intends to transfer.

REQUIREMENTS

Required Courses

		Subtotal: 41
Communications		
ENG 121	English Composition I	3
ENG 122	English Composition II	3
COM 115	Public Speaking	3
	Completing COM 115 is a Colorado	3
	Community College System	
	Requirement, not a gtPathways	
	requirement	
		Subtotal: 9

ENG 121: grade B or better required for degree

Mathematics

MAT 155	Integrated Mathematics I	3
MAT 156	Integrated Mathematics II	3
		Subtotal: 6

Arts and Humanities (select one of the following):

Subtotal: 3

Literature and Humanities

LIT 115	Introduction to Literature I	3
LIT 201	World Literature to 1600	3
LIT 202	World Literature After 1600	3
LIT 211	American Literature to the Civil War	3
LIT 221	British Literature to 1770	3

Natural and Physical Sciences

SCI 155	Integrated Science I with Lab	4
SCI 156	Integrated Science II with Lab	4
		Subtotal: 8

Social and Behavioral Sciences

GEO 105	World Regional Geography	3
HIS 121	U.S. History to Reconstruction	3
POS 111	American Government	3
		Subtotal: 9

Education Requirements

EDU 221	Intro to Education	3
PSY 238	Child Development	3
		Subtotal: 9

PSY 238: ECE 238 does not fulfill this requirement

ADDITIONAL EDUCATION REQUIREMENTS

Intended Transfer Institution:

The additional 19 credits for this degree are determined by your intended transfer institution. Please note that the qualifying courses listed below may total more than 19 credits if the courses are taken at FRCC (exceeding the 60 credits you need to complete this degree). In order to graduate with this degree, students, regardless of transfer plans, must complete the additional 19 credits listed below for one of the public institutions that is part of the articulation agreement.

The following courses qualify for the additional 19 credits of education requirements per the statewide Elementary Education Articulation Agreement. Please see your FRCC advisor for a list of qualifying courses for the following schools: Adams State University, Colorado Mesa University, Colorado State University - Pueblo, Fort Lewis College, University of Colorado - Colorado Springs, and Western State Colorado University. Visit this site to see the final 19 credits for all Colorado schools included in this agreement: <http://higher.ed.colorado.gov/Academics/Transfers/>.

Metropolitan State University of Denver

Human Development Major

ECE 260	Exceptional Child	3
HWE 100	Human Nutrition	3
LIT 255	Children's Literature	3
SOC 101	Introduction to Sociology I	3
PSY 235	Human Growth and Development	3
ART 110	Art Appreciation	3
	or	
MUS 120	Music Appreciation	3
HWE 103	Community First Aid and CPR	1

or
any other transferable (1) credit
course 1

University of Colorado at Boulder**History Major**

HIS 101 Western Civilization: Antiquity-1650 3
HIS 102 Western Civilization: 1650-Present 3
HIS 122 U.S. History Since the Civil War 3

PHI 111 Introduction to Philosophy 3
or
PHI 112 Ethics 3

Choose one of the following

HIS 205 Women in the World 3
LIT 205 Ethnic Literature 3
WST 240 Goddesses and Women in the
Ancient World 3

and one of the following courses

GEY 111 Physical Geology 4
BIO 111 General College Biology I with Lab 5
CHE 101 Introduction to Chemistry I with Lab 5
CHE 111 General College Chemistry I with Lab 5
PHY 105 Conceptual Physics with Lab 4
PHY 111 Physics: Algebra-Based I with Lab 5
PHY 211 Physics: Calculus-Based I with Lab 5

University of Colorado at Denver**Individually Structured Major (Emphasis Elementary Education)**

ART 110 Art Appreciation 3
or

MUS 120 Music Appreciation 3

LIT 115 Introduction to Literature I 3
or

LIT 255 Children's Literature 3

LIT 211 American Literature to the Civil War 3
or
another course from LIT options
above 3

HIS 122 U.S. History Since the Civil War 3

MAT 135 Introduction to Statistics 3

PHI 112 Ethics 3

Choose one of the following

LIT 201 World Literature to 1600 3

LIT 202 World Literature After 1600 3

LIT 211 American Literature to the Civil War 3

University of Northern Colorado**Elementary Education Major**

ART 110 Art Appreciation 3
or

MUS 120 Music Appreciation 3

BIO 105 Science of Biology with Lab 4

EDU 261 Teaching, Learning and Technology 3

LIT 255 Children's Literature 3

HIS 225 Colorado History 3

Choose one of the following

LIT 205 Ethnic Literature 3

WST 200 Introduction to Women's Studies 3

SOC 218 Sociology of Diversity 3

Subtotal: 19-21

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 60

Emergency Medical Services

These certificates prepare students to provide emergency medical services to the general public. Certificate programs include Emergency Medical Technician and Pre-Paramedic. A grade of "C" or above is required for all courses.

Liability insurance and background checks are required for participation in any clinical activity. Also note that immunization requirements also exist for participation in any clinical activity. Contact the campus Emergency Medical Services Program Director for specific immunization requirements for that program/campus.

Assessment testing is required for all students, except those enrolling in some one-semester certificates. Students who place into CCR 093 or above may begin taking this program of study.

Emergency Medical Services - Certificates**EMERGENCY MEDICAL TECHNICIAN**

Field Code: F_CER_EMTB

Campus: Boulder County Campus, Larimer Campus, Loveland, Westminster Campus

REQUIREMENTS**Required Courses**

EMS 121	EMT Fundamentals	3
EMS 122	EMT Medical Emergencies	4
EMS 123	EMT Trauma Emergencies	2
EMS 124	EMT Special Considerations	2
EMS 170	EMT Clinical	1

Total Credit Hours: 12

PRE-PARAMEDIC

Field Code: F_CER_EMSP

Campus: Boulder County Campus, Larimer Campus, Loveland, Westminster Campus

REQUIREMENTS**Required Courses**

BIO 201	Human Anatomy and Physiology I with Lab	4
BIO 202	Human Anatomy and Physiology II with Lab	4
EMS 121	EMT Fundamentals	3
EMS 122	EMT Medical Emergencies	4

EMS 123	EMT Trauma Emergencies	2
EMS 124	EMT Special Considerations	2
EMS 130	EMT Intravenous Therapy	2
EMS 170	EMT Clinical	1
HPR 178	Medical Terminology	1
HPR 190	Basic EKG Interpretation	2

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 25

Forestry, Wildlife and Natural Resources

Forestry, Wildlife and Natural Resources - Associate of Applied Science Degree Pathways

NATURAL RESOURCES

Field Code: F_AAS_FWN

Campus: Larimer Campus

This program prepares students for a wide range of careers in natural resources. Students gain practical skills in forestry, wildlife, aquaculture, fisheries, wildland fire, and the computer analysis of natural resources. Students participate in community natural resources projects.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at the college level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

All courses in both the degree and certificate programs must be completed with a "C" or above to graduate.

Required Courses

GIS 101	Introduction to Geographic Information Systems	3
NRE 100	Foundations of Forestry	3
NRE 110	Forestry Field Research	3
NRE 205	Wildlife and Fisheries Management Principles	3

Subtotal: 12

Required General Education Courses

BIO 111	General College Biology I with Lab	5
ENG 121	English Composition I or	3
COM 115	Public Speaking	3
MAT 107	Career Mathematics or higher	3

Arts and Humanities Elective	3
Social and Behavioral Science Elective	3

Subtotal: 17

Arts and Humanities Social and Behavioral Science Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Elective Courses

Select 31 credits from the following:

AQT 102	Fish Biology and Ichthyology	5
AQT 245	Pond Management	4
BIO 112	General College Biology II with Lab	5
BIO 221	Botany with Lab	5
BIO 222	General College Ecology with Lab	4
CHE 101	Introduction to Chemistry I with Lab	5
ENV 101	Introduction to Environmental Science	4
FSW 100	S-190 Introduction to Wildland Fire	1
FSW 101	S-130 Firefighting Training	2
FSW 143	S-212 Wildfire Chain Saws	2
GIS 210	Intermediate Geographic Information Systems	3
HLT 240	Introductory Soil Science	4
NRE 121	Introduction to Hydrology	3
NRE 200	Ecology: Field Study	3
NRE 215	Fire Ecology	3
NRE 225	Environmental Education	3
NRE 230	Wildlife Law Enforcement	3
NRE 245	Avian Conservation/Ornithology	3
NRE 265	Wilderness Education	3
NRE 278	Seminar	1-3
NRE 280	Internship	3*
NRE 285	Independent Study	1-6
REC 210	Principles of Outdoor Recreation	3

Select one of the following courses:

OUT 156	Survival Plants in Summer I	2
OUT 157	Survival Plants in the Fall	2
OUT 158	Survival Plants in Spring I	2

Subtotal: 31

*NRE 280 can be taken for 1-6 credits. To fulfill Forestry and Wildlife AAS degree pathway requirements, students must complete a minimum of 3 credits. In addition, students may not apply more than 6 credits in Internship or Independent Study programs to any AAS degree pathway in Forestry, Wildlife and Natural Resources.

Total Credit Hours: 60

WILDLIFE TECHNOLOGY

Field Code: F_AAS_WITC

Campus: Larimer Campus

This program prepares students for a career as a wildlife technician. Students gain practical skills in wildlife, aquaculture, fisheries, natural resource management and the computer analysis of natural resources. Students participate in community natural resources projects.

REQUIREMENTS

Required Courses

AQT 102	Fish Biology and Ichthyology	5
GIS 101	Introduction to Geographic Information Systems	3
NRE 100	Foundations of Forestry	3
NRE 110	Forestry Field Research	3
NRE 205	Wildlife and Fisheries Management Principles	3
NRE 230	Wildlife Law Enforcement	3
NRE 245	Avian Conservation/Ornithology	3
NRE 280	Internship	3*

Subtotal: 26

*NRE 280 can be taken for 1-6 credits. To fulfill Forestry and Wildlife AAS degree pathway requirements, students must complete a minimum of 3 credits. In addition, students may not apply more than 6 credits in Internship or Independent Study programs to any AAS degree pathway in Forestry, Wildlife and Natural Resources.

Required General Education Courses

BIO 111	General College Biology I with Lab	5
BIO 112	General College Biology II with Lab	5
ENG 121	English Composition I or	3
COM 115	Public Speaking	3
MAT 107	Career Mathematics or higher	3
	Arts and Humanities Elective	3
	Social and Behavioral Science Elective	3

Subtotal: 22

Arts and Humanities Social and Behavioral Science Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Select 12 credits from the following:

BIO 221	Botany with Lab	5
BIO 222	General College Ecology with Lab	4
CHE 101	Introduction to Chemistry I with Lab	5
ENV 101	Introduction to Environmental Science	4
GIS 210	Intermediate Geographic Information Systems	3
HLT 240	Introductory Soil Science	4
NRE 121	Introduction to Hydrology	3
NRE 200	Ecology: Field Study	3
NRE 215	Fire Ecology	3
NRE 225	Environmental Education	3
NRE 265	Wilderness Education	3
NRE 278	Seminar	1-3
NRE 280	Internship	3*
NRE 285	Independent Study	1-6
REC 210	Principles of Outdoor Recreation	3

Subtotal: 12

Total Credit Hours: 60

FORESTRY TECHNOLOGY

Field Code: F_AAS_FRTC

Campus: Larimer Campus

This program prepares students for a career as a forestry technician. Students gain practical skills in forestry, wildland fire, natural resource management and the computer analysis of natural resources. Students participate in community natural resources projects.

REQUIREMENTS

Required Courses

GIS 101	Introduction to Geographic Information Systems	3
HLT 240	Introductory Soil Science	4
NRE 100	Foundations of Forestry	3
NRE 110	Forestry Field Research	3
NRE 121	Introduction to Hydrology	3
NRE 205	Wildlife and Fisheries Management Principles	3
NRE 280	Internship	3*

Subtotal: 22

*NRE 280 can be taken for 1-6 credits. To fulfill Forestry and Wildlife AAS degree pathway requirements, students must complete a minimum of 3 credits. In addition, students may not apply more than 6 credits in Internship or Independent Study programs to any AAS degree pathway in Forestry, Wildlife and Natural Resources.

Required General Education Courses

BIO 111	General College Biology I with Lab	5
BIO 221	Botany with Lab	5
ENG 121	English Composition I or	3
COM 115	Public Speaking	3
MAT 107	Career Mathematics or higher	3
	Arts and Humanities Elective	3
	Social and Behavioral Science Elective	3

Subtotal: 22

Arts and Humanities Social and Behavioral Science Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Select 16 credits from the following:

AQT 102	Fish Biology and Ichthyology	5
BIO 112	General College Biology II with Lab	5
BIO 222	General College Ecology with Lab	4
CHE 101	Introduction to Chemistry I with Lab	5
ENV 101	Introduction to Environmental Science	4
FSW 100	S-190 Introduction to Wildland Fire	1
FSW 101	S-130 Firefighting Training	2
FSW 143	S-212 Wildfire Chain Saws	2
GIS 210	Intermediate Geographic Information Systems	3
NRE 200	Ecology: Field Study	3
NRE 215	Fire Ecology	3
NRE 225	Environmental Education	3

NRE 230	Wildlife Law Enforcement	3
NRE 245	Avian Conservation/Ornithology	3
NRE 265	Wilderness Education	3
NRE 278	Seminar	1-3
NRE 280	Internship	3*
NRE 285	Independent Study	1-6
REC 210	Principles of Outdoor Recreation	3

Select one of the following courses:

OUT 156	Survival Plants in Summer I	2
OUT 157	Survival Plants in the Fall	2
OUT 158	Survival Plants in Spring I	2

Subtotal: 16

Total Credit Hours: 60

Forestry, Wildlife and Natural Resources - Certificates

The certificate programs are designed for individuals who are seeking a career in natural resources and possess a degree or are seeking job-entry level skills.

NATURAL RESOURCES

Field Code: F_CER_NRT3

Campus: Larimer Campus

REQUIREMENTS

Required Courses

GIS 101	Introduction to Geographic Information Systems	3
NRE 100	Foundations of Forestry	3
NRE 110	Forestry Field Research	3
NRE 205	Wildlife and Fisheries Management Principles	3
	Select 4 credits of electives that satisfy the Natural Resources AAS degree requirements. This includes NRE 280 Internship* and NRE 285 Independent Study courses.	4

*NRE 280 can be taken for 1-6 credits.

Total Credit Hours: 16

FORESTRY

Field Code: F_CER_FWNI

Campus: Larimer Campus

REQUIREMENTS

Required Courses

NRE 100	Foundations of Forestry	3
NRE 110	Forestry Field Research	3
	Select 3 credits of electives that satisfy any of the AAS degree pathway requirements in Natural Resources, Forestry or Wildlife. This includes NRE 280 Internship* and NRE 285 Independent Study courses.	3

*NRE 280 can be taken for 1-6 credits.

Total Credit Hours: 9

WILDLIFE

Field Code: F_CER_FWND

Campus: Larimer Campus

REQUIREMENTS

Required Courses

NRE 110	Forestry Field Research	3
NRE 205	Wildlife and Fisheries Management Principles	3
NRE 230	Wildlife Law Enforcement	3
	or	
	Select 3 credits of electives that satisfy any of the AAS degree pathway requirements in Natural Resources, Forestry or Wildlife. This includes NRE 280 Internship* and NRE 285 Independent Study courses.	3

*NRE 280 can be taken for 1-6 credits.

Total Credit Hours: 9

WILDLAND FIRE

Field Code: F_CER_FWNW

Campus: Larimer Campus

REQUIREMENTS

Required Courses

FSW 100	S-190 Introduction to Wildland Fire	1
FSW 101	S-130 Firefighting Training	2
NRE 215	Fire Ecology	3
NRE 100	Foundations of Forestry	3
	or	
NRE 110	Forestry Field Research	3
	or	
	Select 3 credits of electives that satisfy any of the AAS degree pathway requirements in Natural Resources, Forestry or Wildlife. This includes NRE 280 Internship* and NRE 285 Independent Study courses.	3

*NRE 280 can be taken for 1-6 credits.

Total Credit Hours: 9

NATURAL RESOURCES GEOGRAPHIC INFORMATION SYSTEMS

Field Code: F_CER_FWNG

Campus: Larimer Campus

REQUIREMENTS

Required Courses

GIS 101	Introduction to Geographic Information Systems	3
GIS 210	Intermediate Geographic Information Systems	3

Select 3 credits of electives that satisfy any of the AAS degree pathway requirements in Natural Resources, Forestry or Wildlife. This includes NRE 280 Internship* and NRE 285 Independent Study courses.

*NRE 280 can be taken for 1-6 credits.

Total Credit Hours: 9

ENVIRONMENTAL EDUCATION

Field Code: F_CER_EED1

Campus: Larimer Campus

REQUIREMENTS

Required Courses

NRE 225	Environmental Education	3
NRE 100	Foundations of Forestry	3
NRE 205	Wildlife and Fisheries Management Principles	3
	Select 3 credits of electives that satisfy any of the AAS degree pathway requirements in Natural Resources, Forestry or Wildlife. This includes NRE 280 Internship* and NRE 285 Independent Study courses.	3

*NRE 280 can be taken for 1-6 credits.

Total Credit Hours: 9

NATURAL RESOURCES RECREATION

Field Code: F_CER_NRR

Campus: Larimer Campus

REQUIREMENTS

Required Courses

REC 210	Principles of Outdoor Recreation	3
NRE 265	Wilderness Education	3
NRE 225	Environmental Education	3
	Select 3 credits of electives that satisfy any of the AAS degree pathway requirements in Natural Resources, Forestry or Wildlife. This includes NRE 280 Internship* and NRE 285 Independent Study courses.	3

*NRE 280 can be taken for 1-6 credits.

Total Credit Hours: 9

NATURAL RESOURCES TRANSFER

Field Code:

Campus:

Several courses in the Forestry, Wildlife, and Natural Resources programs will transfer into one of the baccalaureate degree

programs at Colorado State University as well as various four-year colleges, but transfer is neither standardized nor consistent. Students should meet with the program lead/director or an advisor in the Forestry, Wildlife and Natural Resource program to select appropriate courses based upon their transfer objectives.

Geographic Information Systems

The Geographic Information Systems program has current awards pending approval for Catalog 2015-2016. Program updates will be provided on our website and in the catalog addendum once all new awards and award revisions have been finalized. Included in the catalog are the awards as they appear in Catalog 2014-2015.

GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE

Field Code: F_CER_GEO1

Campus: Boulder County Campus

This certificate provides career opportunities in the expanding field of geographic information systems. Students receive both the necessary theoretical background and practical experience.

REQUIREMENTS

Assessment testing is required for all students. Students who place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

A Natural Resources Geographic Information Systems Certificate is also available at the Larimer Campus through Forestry, Wildlife and Natural Resources.

Required Courses

GIS 101	Introduction to Geographic Information Systems	3
GIS 110	Introduction to Cartography	3
GIS 210	Intermediate Geographic Information Systems	3
GIS 212	Remote Sensing and Digital Image Processing	4
GIS 221	Community Assessment and Analysis	3

Subtotal: 15

One of the following courses

BUS 217	Business Communication and Report Writing	3
ENG 131	Technical Writing I	3
ENG 121	English Composition I	3

Required Electives

Select 6 credits from the following:

GIS 131	Global Positioning Systems for Global Information Systems	3
GIS 150	Relational Database Management Systems for GIS	3
GIS 165	Project Management	3
GIS 205	Applications	3

GIS 211	Spatial Data Modeling and Analysis	4
GIS 221	Community Assessment and Analysis	3
GIS 275	Special Topics	
GIS 280	Internship	3
		Subtotal: 6

Total Credit Hours: 21

GIS FUNDAMENTALS CERTIFICATE

Field Code: F_CER_GEO2

Campus: Boulder County Campus

REQUIREMENTS

Required Courses

GIS 101	Introduction to Geographic Information Systems	3
GIS 110	Introduction to Cartography	3
GIS 210	Intermediate Geographic Information Systems	3

Select 3 credits from the following:

GIS 150	Relational Database Management Systems for GIS	3
GIS 165	Project Management	3
GIS 211	Spatial Data Modeling and Analysis	4
GIS 212	Remote Sensing and Digital Image Processing	4
GIS 221	Community Assessment and Analysis	3
GIS 280	Internship	3
GIS 285	Independent Study	3

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 12

Health Information Technology

HEALTH INFORMATION TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_HIT1

Campus: Westminster Campus

This two-year program leads to an Associate of Applied Science (AAS) Degree in Health Information Technology designed to develop the technical skills necessary for managing health information within the healthcare delivery system. The FRCC HIT program is a CAHIIM accredited program and upon completion of the program, students can test for the national RHIT certification from AHIMA. Students may also transfer to a Bachelor's program in Health Information Management at Regis University.

For those students considering a bachelor's degree, they should take the HPR208 2 credit Medical Terminology and the MAT135 Intro to Statistics for their math requirement.

Any student interested in the HIT program is welcome to attend an HIT Information Session or meet with the HIT Program Director. Note: Not all courses are offered every semester so new HIT students should meet with the Program Director to establish their degree plan.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Required Courses

HIT 101	Health Information Management Science	3
HIT 105	Principles of Healthcare Reimbursement	3
HIT 111	Health Data Management & Information Systems	3
HIT 112	Legal Aspects for Health Records	2
HIT 122	Workflow Fund of Healthcare	3
HIT 188	Health Information Practicum I	2
HIT 220	ICD Coding I	3
HIT 221	ICD Coding II	2
HIT 222	Quality Management	3
HIT 225	Health Information Management	3
HIT 231	ICD Coding III	5
HIT 241	CPT Coding Basic Principles	3
HIT 289	HIT Capstone Course	3
MOT 125	Basic Medical Sciences I	3
MOT 133	Basic Medical Sciences II	3
MOT 135	Basic Medical Sciences III	3
HPR 178	Medical Terminology or	1
HPR 208	Medical Terminology For Health Professionals	2
		Subtotal: 48

Required General Education Courses

CIS 118	Introduction to PC Applications	3
COM 125	Interpersonal Communication or	3
COM 115	Public Speaking	3
ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
	MAT 107 or higher. Preferred: MAT 135	3
	PSY 101 or any other PSY course	3
		Subtotal: 15

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that

"prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 63

Heating, Ventilation, Air Conditioning and Refrigeration

HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_HVA

Campus: Loveland

This program provides training in basic through advanced heating, ventilation, air conditioning, and refrigeration. Other topics in the program include: basic electricity and electrical components for HVACR, refrigerant tubing, fabrication, soldering, brazing, and trouble shooting, plus residential and commercial heating, hot water heating, industrial controls, advanced troubleshooting, customer service, teamwork, and communication.

REQUIREMENTS

All courses applied to the degree or certificate must be completed with a grade of C or above.

Assessment testing is required for all students. Students who are reading at college level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study. Students must complete the Industry Competency Exams (ICE) Residential Air Conditioning and Heating, Light Commercial Air Conditioning and Heating, and Commercial Refrigeration as a requirement for this AAS degree. Contact the Testing Center for current pricing of the ICE Exams. Students need to sign up with the Testing Center before taking this exam and pay for the exam at the time of testing.

Required Courses

CAD 100	Print Reading for CAD	3
HVA 101	Introduction to Air Conditioning and Refrigeration	4
HVA 102	Basic Refrigeration	4
HVA 103	Basic Electricity	3
HVA 104	Electrical Components for Air Conditioning and Refrigeration	4
HVA 122	Commercial Refrigeration	4
HVA 123	Air Conditioning	4
HVA 124	Advanced Air Conditioning	4
HVA 200	International Residential Codes - Mechanical and Fuel Gas	2
HVA 201	Heating for Commercial Applications	3
HVA 202	Troubleshooting and Customer Service	3
HVA 203	Industrial Controls	3
HVA 247	Hot Water Heating Systems	4

HVA 280	Internship or	1
HVA 289	Capstone	1
MTE 110	Manufacturing Communication and Teamwork or	3
COM 125	Interpersonal Communication	3
		Subtotal: 49

Required General Education Courses

ENG 131	Technical Writing I or	3
ENG 121	English Composition I	3
MAT 107	Career Mathematics or higher	3
PHY 105	Conceptual Physics with Lab or higher	4
	General Studies Elective	3
	Social and Behavioral Sciences or Arts and Humanities Elective	3
		Subtotal: 16

General Studies and Social and Behavioral Sciences or Arts and Humanities Electives: * Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Gainful Employment Disclosure Information

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Total Credit Hours: 65

Heating, Ventilation, Air Conditioning and Refrigeration - Certificates

RESIDENTIAL AIR CONDITIONING AND HEATING

Field Code: F_CER_HVAA

Campus: Loveland

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college level and place into CCR 093 or above and MAT 050 or above may begin this certificate of study. This certificate provides training in basic to advanced air conditioning and heating. Students must complete the Industry Competency Exam (ICE) Residential Air Conditioning and Heating as a requirement of this certificate. Contact the Testing Center for

current pricing of the ICE Exam. Students need to sign up with the Testing Center before taking this exam and pay for the exam at the time of testing.

Required Courses

HVA 101	Introduction to Air Conditioning and Refrigeration	4
HVA 102	Basic Refrigeration	4
HVA 103	Basic Electricity	3
HVA 104	Electrical Components for Air Conditioning and Refrigeration	4
HVA 123	Air Conditioning	4
HVA 124	Advanced Air Conditioning	4
HVA 200	International Residential Codes - Mechanical and Fuel Gas	2
HVA 202	Troubleshooting and Customer Service	3
HVA 247	Hot Water Heating Systems	4
MTE 110	Manufacturing Communication and Teamwork	3
	or	
COM 125	Interpersonal Communication	3

Total Credit Hours: 35

LIGHT COMMERCIAL AIR CONDITIONING AND HEATING

Field Code: F_CER_HACH

Campus: Loveland

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college level and place into CCR 093 or above and MAT 050 or above may begin this certificate of study. This certificate provides training in light commercial air conditioning and heating. Students must complete the Industry Competency Exam (ICE) Light Commercial Air Conditioning and Heating as a requirement of this certificate. Contact the Testing Center for current pricing of the ICE Exam. Students need to sign up with the Testing Center before taking this exam and pay for the exam at the time of testing.

Required Courses

HVA 101	Introduction to Air Conditioning and Refrigeration	4
HVA 102	Basic Refrigeration	4
HVA 103	Basic Electricity	3
HVA 104	Electrical Components for Air Conditioning and Refrigeration	4
HVA 123	Air Conditioning	4
HVA 124	Advanced Air Conditioning	4
HVA 200	International Residential Codes - Mechanical and Fuel Gas	2
HVA 201	Heating for Commercial Applications	3
HVA 202	Troubleshooting and Customer Service	3
HVA 203	Industrial Controls	3
MTE 110	Manufacturing Communication and Teamwork	3
	or	
COM 125	Interpersonal Communication	3

Total Credit Hours: 37

COMMERCIAL REFRIGERATION

Field Code: F_CER_HVAM

Campus: Loveland

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this certificate of study. Students scoring below this level should consult with a faculty member before registering for courses in this certificate of study. This certificate provides training in residential and commercial refrigeration. Students must complete the Industry Competency Exam (ICE) Commercial Refrigeration as a requirement of this certificate. Contact the Testing Center for current pricing of the ICE Exam. Students need to sign up with the Testing Center before taking this exam and pay for the exam at the time of testing.

Required Courses

HVA 101	Introduction to Air Conditioning and Refrigeration	4
HVA 102	Basic Refrigeration	4
HVA 103	Basic Electricity	3
HVA 104	Electrical Components for Air Conditioning and Refrigeration	4
HVA 122	Commercial Refrigeration	4
HVA 202	Troubleshooting and Customer Service	3
HVA 203	Industrial Controls	3
MTE 110	Manufacturing Communication and Teamwork	3
	or	
COM 125	Interpersonal Communication	3

Total Credit Hours: 28

Holistic Health

HOLISTIC HEALTH - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_HH1

Campus: Larimer Campus, Loveland, Online Learning

This two year program is designed to prepare students to begin practice in an area of holistic health, including practitioners in aromatherapy, yoga teaching, massage, reflexology, Reiki, wellness coaching, etc. Graduates will be aligned to set up their own practices in a stand-alone facility, or work alongside other practitioners in the holistic and medical fields, including wellness facilities, clinics, and hospitals. Graduates are qualified for employment in various levels of entrepreneurship or independent and corporate wellness as well as health care offices or organizations. It will prepare students to take state and national certification exams with a focus on areas of aromatherapy, reflexology, yoga, or energy/body work and/or join highly-rated state and nationally accredited professional affiliations.

REQUIREMENTS

Assessment testing is required of all students. Students who place into CCR 093 (or above), MAT 050 (or above) may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study. Upon doing so, students are strongly encouraged to begin with HHP 100 (Complimentary Healing Methods) as an exploratory class about the Holistic Health field.

This degree program will be transferable to Metropolitan State University of Denver to be applied towards the Bachelor of Science in Integrative Healthcare and/or a Wellness Coaching minor at their institution. Possible transfers to other university programs are in process, so please check with the Program Director for more details.

All courses in this degree must be completed with a "C" or above to graduate.

Required General Education Courses

ANT 101	Cultural Anthropology	3
ENG 121	English Composition I	3
BIO 201	Human Anatomy and Physiology I with Lab	4
BIO 202	Human Anatomy and Physiology II with Lab	4
CHE 101	Introduction to Chemistry I with Lab	5
COM 125	Interpersonal Communication	3
HWE 100	Human Nutrition	3
HPR 208	Medical Terminology For Health Professionals	2
MAT 135	Introduction to Statistics	3
PSY 101	General Psychology I or	3
PSY 235	Human Growth and Development	3
	Any GT-HI History Course	3
	Arts and Humanities Elective	3

Subtotal: 39

Arts & Humanities elective (3) must be selected from the Approved General Education Electives List for the AAS degree.

Required Courses

HHP 100	Complementary Healing Methods	1
HHP 107	Managing Life's Stresses	1
HHP 229	Wellness Coaching	1
HHP 252	Holistic Health Keystone	3
HHP 263	Creating a Holistic Business Practice	2
HHP 289	Capstone	

Subtotal: 10**Required Elective Courses**

Electives should be based upon professional interest; students are strongly advised to consult with a HHP program advisor before selecting elective courses.

Select an additional 11 credit hours of HHP, HWE or MST courses

Subtotal: 11**Gainful Employment Disclosure Information**

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to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 60**Holistic Health - Certificates****AROMATHERAPY**

Field Code: F_CER_HHAR

Campus: Online Learning

REQUIREMENTS**Required Courses**

BIO 106	Basic Anatomy and Physiology	4
HHP 204	Applied Aromatherapy	3
HHP 263	Creating a Holistic Business Practice	2
HHP 264	Advanced Aromatherapy for Certificate	4
HHP 288	Practicum	2

BIO 201 & BIO 202 may substitute for BIO 106

Total Credit Hours: 15**HOLISTIC HEALTH**

Field Code: F_CER_HHHH

Campus: Larimer Campus, Loveland, Online Learning

This certificate program is designed to augment the scope of practice of individuals in the health care profession and to enhance personal growth for the layperson. Holistic health is a growing profession in delivering alternative practice modalities such as wellness coaching and herbology.

REQUIREMENTS

Assessment testing is required for all students. Students who place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Required Courses

HHP 100	Complementary Healing Methods	1
HHP 229	Wellness Coaching	1
HHP 240	Holistic Nutrition: Digestive Healing	3
HHP 252	Holistic Health Keystone	3
HHP 263	Creating a Holistic Business Practice	2
HHP 289	Capstone	

Subtotal: 12**Required Elective Courses**

Select HHP courses in consultation with the director or faculty advisor in the Holistic Health Program

Subtotal: 3**Total Credit Hours: 15****MASSAGE THERAPY**

Field Code: F_CER_HH4

Campus: Loveland

This 3-4 semester program is designed to prepare students to begin a practice as a massage therapist in the State of Colorado. This certificate program is designed to provide training in basic massage practices and techniques, and includes an opportunity to experience specialized therapeutic massages. Graduates will be prepared to set up their own massage practices in a stand-alone facility, or work alongside other practitioners in the holistic and medical fields. It will prepare students to take the national certification exam through the National Certification Board for Therapeutic Massage and Bodywork. On successful completion of coursework, this certificate also meets the requirements to apply for licensure with the State of Colorado.

REQUIREMENTS

Assessment testing is required for all students. Students who place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study. All courses in this degree must be completed with a "C" or better to graduate.

Students will be required to meet with an advisor to develop a plan of study with the program director prior to degree start.

Required Prerequisite Courses

BIO 106	Basic Anatomy and Physiology	4
ENG 121	English Composition I	3
HPR 208	Medical Terminology For Health Professionals	2
HHP 224	Introduction to Massage therapy	1
		Subtotal: 10

Required Courses

MST 111	Basic Massage Therapies	4
MST 113	Professional Massages	3
MST 178	Seminar	3
MST 184	Clinical Massage I	2
MST 216	Pathology for Massage therapy	3
MST 284	Clinical Massage II	2
HHP 208	Advanced Musculoskeletal Anatomy	2
HHP 261	Ethics in Holistic Touch Therapies	2
HHP 263	Creating a Holistic Business Practice	2
HPR 117	Anatomical Kinesiology	3
HPR 102	CPR for Professionals	0.5
	Select HHP courses in consultation with the director or faculty advisor in the Holistic Health Program	3
		Subtotal: 29.5

Total Credit Hours: 39.5

REFLEXOLOGY

Field Code: F_CER_HH3

Campus: Larimer Campus, Loveland

REQUIREMENTS

Required Courses

BIO 106	Basic Anatomy and Physiology	4
HHP 166	Introduction to Reflexology	1
HHP 168	Reflexology of the Hands and Feet	3
HHP 260	Advanced Reflexology	2
HHP 261	Ethics in Holistic Touch Therapies	2

HHP 288	Practicum	2
		Subtotal: 14

Required Elective Courses

Select 1 credit of HHP credit in consultation with the Director or a Faculty Advisor in the Holistic Health Program. Students interested in creating a Holistic practice are highly encouraged to complete HHP 263 Creating a Holistic Business Practice.

Subtotal: 1

Total Credit Hours: 15

YOGA TEACHER

Field Code: F_CER_HH5

Campus: Larimer Campus, Loveland

REQUIREMENTS

Required Courses

HHP 250	Teacher Training Institute for Yoga	10
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Total Credit Hours: 10

Horticulture and Landscape Technologies

This program prepares students for a wide range of careers in landscape contracting, ornamental horticulture and urban farming. Specialty certificates provide entry-level career preparation in horticulture or allow individuals already working in horticulture to upgrade or expand their skill sets. Students may complete some courses, enter the workforce, and then return at any time to complete the degree.

Students planning to complete a baccalaureate degree in Horticulture with a concentration in Horticulture Business at Colorado State University are encouraged to enroll in the program of study outlined by the Statewide Horticulture Business Management articulation agreement or to seek advice from a HLT Program Director or CSU transfer advisor before enrolling in coursework. The transfer agreement can be found at:
<http://highered.colorado.gov/Academics/Transfers/Agreements/horticulture.pdf>

HORTICULTURE AND LANDSCAPE TECHNOLOGIES - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_HLT

Campus: Larimer Campus, Westminster Campus

Students contemplating the Associate of Applied Science (AAS) degree are encouraged (but not required) to complete the HLT General Education Core before starting coursework with an HLT prefix. Those who have completed the General Education Core or who wish to begin taking courses with an HLT prefix are encouraged to select a certificate program that interests them and complete that coursework first as this allows those individuals to enter the workforce before completing the AAS degree.

To earn the **Associate of Applied Science degree** students complete:

1. The 22 credit HLT AAS General Education Core, and
2. The 18-credit Floral Design (p. 99) or Horticulture (p. 99) certificate, and
3. 20-credits of Approved Electives, 10 of which must have an HLT or an FLD prefix (see Certificate and Elective Credits section of AAS Requirements).

While completing these 20 credits of electives we recommend the student consider pursuing one of the following 18-credit Specialty Certificates as a concentration:

- Irrigation Contracting and Management (p. 99)
- Landscape Construction
- Landscape Design (p. 100)
- Landscape Maintenance (p. 101)
- Nursery Greenhouse and Garden Center Management (p. 101)
- Turfgrass Management (p. 101)
- Urban Agriculture Management (p. 102)

This program also offers a 6-credit **Irrigation Technician Certificate** (p. 100) that prepares student for entry level employment doing sprinkler repair. This certificate is not financially aid eligible.

REQUIREMENTS

To graduate from this program the student must complete all degree coursework with a "C" or better. Assessment testing is required of all students. Students placing into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below these levels should consult with a Program Director before registering for courses in this program of study.

HLT Associate of Applied Science

Arts and Humanities (3 credits):

SPA 101	Conversational Spanish I	3
	or	
	higher	

Communications (3 credits):

ENG 121	English Composition I	3
ENG 122	English Composition II	3
ENG 131	Technical Writing I	3
ENG 132	Technical Writing II	3
COM 115	Public Speaking	3
	or	
COM 125	Interpersonal Communication	3

Natural and Physical Sciences (4 credits):

BIO 105	Science of Biology with Lab	4
BIO 221	Botany with Lab	5
	or	
CHE 101	Introduction to Chemistry I with Lab	5
	or	
	higher	

Social and Behavioral Sciences (3 credits):

ECO 201	Principles of Macroeconomics	3
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	or	
ECO 202	Principles of Microeconomics	3

Business Management (3 credits):

BUS 102	Entrepreneurial Operations	3
	or	
MAN 216	Small Business Management	3

Computer Technology (6 credits):

Completes two of the following courses

NOTE:

- Landscape Design Certificate students must complete CAD 101 **and** two additional courses (6 credits) of computer technology courses to earn the AAS degree.

CAD 101	Computer-Aided Drafting I	3
CAD 102	Computer-Aided Drafting II	3
CAD 115	Sketchup	3
CAD 202	Computer-Aided Drafting/3D	3
CAD 216	Advanced Sketchup	3
CIS 118	Introduction to PC Applications	3
CIS 128	Operating System: Using Microsoft Windows	3
CIS 135	Complete PC Word Processing: Word	3
CIS 145	Complete PC Database: ACCESS	3
CIS 155	PC Spreadsheet Concepts: Excel	3
CWB 110	Complete Web Authoring	3
GIS 101	Introduction to Geographic Information Systems	3
GIS 110	Introduction to Cartography	3
MGD 111	Adobe Photoshop I	3
	or	
MGD 112	Adobe Illustrator I	3

Certificate AND Elective Credits (38 credits):

Complete the Horticulture (18 credits) OR Floral Design (18 credits) Certificate AND 20 credits of electives.

- 10 or more of these elective credits **MUST HAVE** an HLT or FLD prefix and may include the completion of an additional 17 or 18 credit HLT Specialized Certificate.
- Up to 10 credits of elective coursework **MAY COME** from the following list of courses. These courses must be in addition to courses the student has taken to fulfill their Arts and Humanities, Communications, Natural and Physical Sciences, Social and Behavioral Sciences, Business Management or Computer Technology requirements.

BIO 221	Botany with Lab	5
BUS 226	Business Statistics	3
	or	
MAT 135	Introduction to Statistics	3
CHE 101	Introduction to Chemistry I with Lab	5
CHE 111	General College Chemistry I with Lab	5
CHE 205	Introductory Organic Chemistry with Lab	5
COM 115	Public Speaking	3
ECO 201	Principles of Macroeconomics	3
	or	
ECO 202	Principles of Microeconomics	3
GEY 111	Physical Geology	4

MAT 121	College Algebra	4
MAT 166	Pre-Calculus	5
PHY 111	Physics: Algebra-Based I with Lab	5
PHY 112	Physics: Algebra-Based II with Lab	5
PSY 101	General Psychology I	3

SPA 111	Spanish Language I or	5
SPA 112	Spanish Language II	5

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Total Credit Hours: 60**Horticulture and Landscape Technologies - Certificates**

Certificates provide job entry skills in horticulture or allow individuals already working in horticulture to upgrade or expand their skill sets.

Students contemplating the associate of applied science degree are encouraged to begin their program of study by selecting a certificate program that interests them. This allows those individuals to enter the workforce before completing the AAS degree. Certificate credits are then applied as a block of classes that work towards completion of the AAS degree.

FLORAL DESIGN

Field Code: F_CER_HL1A

Campus: Larimer Campus

This certificate prepares students to work in or own a flower shop or floral service.

- Students contemplating transfer to Colorado State University should take MAT121.

REQUIREMENTS**Required Courses**

FLD 100	Introductory Floral Design	3
FLD 200	Advanced Floral Design	3
FLD 289	Capstone	4
HLT 223	Annuals, Bulbs, and Grasses or	2
HLT 226	Interior Plants	2
HLT 280	Internship or	3
HLT 287	Cooperative Education	3
MAT 107	Career Mathematics or	3
MAT 108	Technical Mathematics	4

MAT 121	College Algebra or higher	4
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Total Credit Hours: 18**HORTICULTURE**

Field Code: F_CER_HRTC

Campus: Larimer Campus, Westminster Campus

This certificate provides students with a fundamental understanding of horticulture science. It also allows students with unique career goals to "design their own degree" with faculty guidance.

- Students contemplating transfer to Colorado State University should take MAT 121.
- AAS students must complete elective courses that do not appear in the HLT Specialty Certificate they plan to complete as part of their AAS coursework (See a HLT program director for guidance).

REQUIREMENTS**Required Courses**

HLT 101	Introduction to Horticulture	4
HLT 240	Introductory Soil Science	4
MAT 107	Career Mathematics or	3
MAT 108	Technical Mathematics or	4
MAT 121	College Algebra or higher	4

Complete 7 credits of elective course work with a FLD or HLT prefix

Total Credit Hours: 18**IRRIGATION CONTRACTING AND MANAGEMENT**

Field Code: F_CER_HL2A

Campus: Larimer Campus, Westminster Campus

Water management is a critical and growing part of the horticulture industry with great job prospects for interested students. This certificate offers students an enhanced skillset to students who wish to work for, or own, an irrigation contracting company.

HLT Program Directors recommend that students enrolled in this certificate:

- Begin their studies with HLT 150 Irrigation I and HLT 151 Irrigation II as this allows the student the opportunity to complete the 6 credit Irrigation Technician Certificate and enter the workplace while finishing this certificate.
- Complete the Horticulture certificate and /or HLT AAS Degree

- Take HLT 237 Landscape Bidding and Estimating as an elective while completing a Horticulture Certificate or HLT AAS degree.

REQUIREMENTS

Required Courses

HLT 131	Sustainable Horticulture	3
HLT 150	Irrigation I	3
HLT 151	Irrigation II	3
HLT 210	Landscape Management	4
HLT 250	Irrigation III: Design	2
HLT 280	Internship or	3
HLT 287	Cooperative Education	3

Total Credit Hours: 18

IRRIGATION TECHNICIAN

Field Code: F_CER_HL2B

Campus: Larimer Campus, Westminster Campus

This certificate provides basic instruction in landscape irrigation installation and maintenance so that students can gain entry level employment as quickly as possible. Credits from this certificate may be applied to the Irrigation Contracting and Management Certificate.

REQUIREMENTS

Required Courses

HLT 150	Irrigation I	3
HLT 151	Irrigation II	3

NOTE: This certificate is not financial aid eligible, but may be earned as part of other financial-aid-eligible certificates.

Total Credit Hours: 6

LANDSCAPE CAD TECHNICIAN

Field Code: F_CER_CADL

Campus: Larimer Campus, Westminster Campus

The **Landscape CAD Technician Certificate** (p. 100) is offered by FRCC's Computer-Aided Drafting and Design program and includes several HLT courses. For details see the **Computer-Aided Drafting and Design** (p. 72) **degrees and certificates** listings in this catalog or contact the CAD program director at your campus.

LANDSCAPE CONTRACTING TECHNICIAN

Field Code: F_CER_HLCT

Campus: Larimer Campus, Westminster Campus

This certificate prepares students to work in landscape construction or to start their own landscape construction company.

HLT Program Directors recommend that students enrolled in this certificate also complete:

- HLT 224 Herbaceous Perennials
- the Horticulture certificate and/or HLT AAS Degree.

Completing this certificate and the following courses allows the student to earn other specialty certificates:

- HLT 151 Irrigation II (to earn the Irrigation Technician Certificate)
- HLT 210 Landscape Management and HLT 223 Annuals, Bulbs and Grasses (Landscape Maintenance Technician Certificate)
- HLT 131 Sustainable Horticulture, HLT 151 Irrigation II, and HLT 210 Landscape Management (Irrigation Contracting and Management Certificate)

REQUIREMENTS

Required Courses

HLT 150	Irrigation I	3
HLT 221	Woody Plants: Trees and Conifers	3
HLT 222	Woody Plants: Shrubs and Vines	3
HLT 236	Landscape Construction	4
HLT 237	Landscape Bidding and Estimating	2
HLT 280	Internship or	3
HLT 287	Cooperative Education	3

Total Credit Hours: 18

LANDSCAPE DESIGN

Field Code: F_CER_LSPD

Campus: Larimer Campus, Westminster Campus

See also Landscape CAD Technician.

This certificate prepares students to work as landscape design assistants, or designers for landscape design firms or to start their own garden design business. **The focus of the program is on residential and small scale design.**

HLT Program Directors recommend that students enrolled in this certificate:

- Complete the Horticulture certificate and/or HLT AAS Degree.
- Take HLT 221 Woody Plants: Trees and Conifers, HLT 222 Woody Plants: Shrubs and Vines, HLT 223 Annuals, Bulbs and Grasses, HLT224 Herbaceous Perennials, HLT 236 Landscape Construction, and HLT237 Landscape Bidding and Estimating as electives when completing their Horticulture Certificate or HLT AAS degree.

REQUIREMENTS

Required Courses

CAD 101	Computer-Aided Drafting I	3
HLT 130	Landscape Design I	3
HLT 131	Sustainable Horticulture	3
HLT 230	Landscape Design II	3
HLT 232	Landscape Design III	3
HLT 280	Internship or	3
HLT 287	Cooperative Education	3

Total Credit Hours: 18

LANDSCAPE MAINTENANCE TECHNICIAN

Field Code: F_CER_HLT3

Campus: Larimer Campus, Westminster Campus

This program prepares students to work for landscape maintenance companies including tree care and plant health care companies.

HLT Program Directors recommend that students enrolled in this certificate:

- Begin their studies with HLT 150 Irrigation I and HLT 151 Irrigation II as this allows them to complete the 6 credit Irrigation Technician Certificate then enter the workplace before finishing this certificate.
- Complete the Horticulture certificate and/or HLT AAS Degree.
- Take HLT 131 Sustainable Horticulture as part of their Horticulture Certificate or HLT AAS degree.

REQUIREMENTS

Required Courses

HLT 150	Irrigation I and	3
HLT 151	Irrigation II or	3
HLT 202	Plant Health Care and	4
HLT 208	Pesticide Safety and Use	2
HLT 210	Landscape Management	4
HLT 211	Arboriculture or	3
HLT 221	Woody Plants: Trees and Conifers or	3
HLT 222	Woody Plants: Shrubs and Vines	3
HLT 223	Annuals, Bulbs, and Grasses	2
HLT 280	Internship or	3
HLT 287	Cooperative Education	3

Total Credit Hours: 18

NURSERY, GREENHOUSE, AND GARDEN CENTER MANAGEMENT

Field Code: F_CER_HNGG

Campus: Larimer Campus, Westminster Campus

This program prepares students to work in, or own, a retail garden center or a wholesale or retail nursery or greenhouse.

HLT Program Directors recommend that students enrolled in this certificate:

- Complete the Horticulture or Floral Design certificate and/or HLT AAS Degree.

- Take any remaining courses in this certificate as electives when completing a Horticulture Certificate, Floral Design Certificate or HLT AAS degree.

REQUIREMENTS

Required Courses

HLT 160	Greenhouse Management or	4
HLT 165	Nursery and Garden Center Management	4
HLT 202	Plant Health Care or	4
HLT 260	Plant Propagation	4
HLT 280	Internship or	3
HLT 287	Cooperative Education	3

Complete 6 credits from the following list:

HLT 221	Woody Plants: Trees and Conifers	3
HLT 222	Woody Plants: Shrubs and Vines	3
HLT 223	Annuals, Bulbs, and Grasses	2
HLT 224	Herbaceous Perennials	4
HLT 226	Interior Plants	2

Total Credit Hours: 17

TURFGRASS MANAGEMENT

Field Code: F_CER_HLTG

Campus: Larimer Campus, Westminster Campus

This program prepares students to work in commercial or residential lawn care or in the specialized fields of golf course turf management or sports turf management.

HLT Program Directors recommend that students enrolled in this certificate:

- Begin their studies by completing the Irrigation Technician Certificate (by completing HLT 150 and HLT 151) as this allows the student the opportunity to enter the workplace while finishing this certificate.
- Complete the Horticulture certificate and/ or HLT AAS Degree.
- Take the following courses as electives while completing a Horticulture Certificate or HLT AAS degree: HLT 150 Irrigation I, HLT 151 Irrigation II, HLT 202 Plant Health Care, HLT 208 Pesticide Safety and Use, HLT 240 Introductory Soil Science

REQUIREMENTS

Required Courses

HLT 150	Irrigation I and	3
HLT 151	Irrigation II or	3
HLT 202	Plant Health Care and	4
HLT 208	Pesticide Safety and Use	2
HLT 210	Landscape Management	4
HLT 242	Turfgrass Management	4

HLT 280	Internship	3
	or	
HLT 287	Cooperative Education	3

Total Credit Hours: 17

URBAN AGRICULTURE MANAGEMENT

Field Code: F_CER_UAGM

Campus: Larimer Campus, Westminster Campus

This program prepares students to manage or work in an urban agriculture operation (the production of high value fruit and vegetable crops in an urban setting).

HLT Program Directors recommend that students enrolled in this certificate:

- Complete the Horticulture certificate and/or HLT AAS Degree.
- Take the following courses as electives while completing a Horticulture Certificate or HLT AAS degree: HLT 150 Irrigation I and HLT 160 Greenhouse Management.

REQUIREMENTS

Required Courses

HLT 202	Plant Health Care	4
HLT 208	Pesticide Safety and Use	2
HLT 240	Introductory Soil Science	4
HLT 262	Urban Farm Management	4
HLT 280	Internship	3
	or	
HLT 287	Cooperative Education	3

Total Credit Hours: 17

Hospitality and Culinary Arts Management

Hospitality and Culinary Arts Management - Associate of Applied Science Degree Pathways

CULINARIAN

Field Code: F_AAS_HO1A

Campus: Larimer Campus

This degree offers courses that provide entry level training in Culinary Arts. The degree is designed to prepare students with the necessary skills and knowledge for careers that include entry level management positions in catering and restaurants. Students will participate in four culinary laboratory courses, as well as one internship. During these courses, students receive applied experiences in both the food service and operations of the hospitality industry. Students take a nationally recognized test from the Education Foundation of the National Restaurant Association, if passed with a score of 75% or more students receive the ServSafe® Certification. Students must earn a "C" or above in all required courses applied to the degree program.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and

MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Students must consult with HOS program director before registering for HOS 280.

Required Courses

CUA 101	Food Safety and Sanitation	2
HOS 110	Introduction to Hospitality	3
HOS 120	Service Management	3
HOS 215	Training and Development	3
CUA 125	Introduction to Foods	4
CUA 129	Center of the Plate	4
CUA 145	Introduction to Baking	4
CUA 210	Adv Cuisine and Garde Manger	4
CUA 261	Cost Controls	3
CUA 262	Purchasing for the Hospitality Industry	3
HOS 280	Internship	3

Subtotal: 36

Required Business Support Courses

ACC 121	Accounting Principles I	4
BUS 115	Introduction to Business	3
CIS 118	Introduction to PC Applications	3

Subtotal: 10

Required General Education Courses

ENG 121	English Composition I	3
	or	
ENG 131	Technical Writing I	3
MAT 107	Career Mathematics	3
	or	
	higher	
	Arts and Humanities or Social Science Elective	3
	General Studies Elective	3
	Natural or Physical Science Elective	4

Subtotal: 16

Arts and Humanities or Social Science, General Studies, Natural or Physical Science Electives: Electives must be selected from the Approved General Education Electives List for the AAS Degree (p. 56).

Total Credit Hours: 62

EVENTS PLANNING

Field Code: F_AAS_HO4A

Campus: Larimer Campus

This degree offers courses that provide entry level management skills in Event Planning. The degree is designed to prepare students with the necessary skills and knowledge for careers in Meetings, Conventions, Expositions, and Special Events. Students will participate in one industry related internship. During these courses, students receive applied experiences in both service and operational areas of Event Planning. Students take a nationally recognized test from the Education Foundation of the National Restaurant Association, if passed with a score of 75% or more students receive the ServSafe® Certification.

Students must earn a “C” or above in all required courses applied to the degree program.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Students must consult with HOS program director before registering for HOS 280.

Required Courses

CUA 101	Food Safety and Sanitation	2
HOS 110	Introduction to Hospitality	3
HOS 120	Service Management	3
HOS 215	Training and Development	3
CUA 120	Wines and Spirits	2
HOS 131	Planning for Special Events	3
HOS 141	Convention Management	3
HOS 210	Event Finances	3
HOS 255	Hospitality HR Management	3
HOS 280	Internship	3

Subtotal: 28

Required Business Support Courses

ACC 121	Accounting Principles I	4
BUS 115	Introduction to Business	3
CIS 118	Introduction to PC Applications	3
MAN 225	Managerial Finance	3
MAN 230	Corporate Ethics & Social Resp or	3
MAR 111	Principles of Sales	3

Subtotal: 16

Required General Education Courses

ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 107	Career Mathematics or higher	3
	Arts and Humanities or Social Science Elective	3
	General Studies Elective	3
	Natural or Physical Science Elective	4

Subtotal: 16

Arts and Humanities or Social Science, General Studies, Natural or Physical Science Electives: Electives must be selected from the Approved General Education Electives List for the AAS Degree (p. 56).

Total Credit Hours: 60

HOTEL MANAGEMENT

Field Code: F_AAS_HO2A

Campus: Larimer Campus

This degree offers courses that provide entry level management skills in the Hotel industry. The degree is designed to prepare

students with the necessary skills and knowledge for careers in the various classifications of Hotels. Students will participate in one industry related internship. During these courses, students receive applied experiences in both service and operational areas of the Hotel industry. Students take a nationally recognized test from the Education Foundation of the National Restaurant Association, if passed with a score of 75% or more students receive the ServSafe® Certification. Students must earn a “C” or above in all required courses applied to the degree program.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Students must consult with HOS program director before registering for HOS 280.

Required Courses

CUA 101	Food Safety and Sanitation	2
HOS 110	Introduction to Hospitality	3
HOS 120	Service Management	3
HOS 215	Training and Development	3
HOS 131	Planning for Special Events	3
HOS 141	Convention Management	3
HOS 242	Hotel Sales and Marketing	3
HOS 251	Hotel Operations	3
HOS 255	Hospitality HR Management	3
CUA 261	Cost Controls	3
HOS 280	Internship	3

Subtotal: 32

Required Business Support Courses

ACC 121	Accounting Principles I	4
BUS 115	Introduction to Business	3
CIS 118	Introduction to PC Applications	3
MAN 225	Managerial Finance	3

Subtotal: 13

Required General Education Courses

ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 107	Career Mathematics or higher	3

	Arts and Humanities or Social Science Elective	3
	General Studies Elective	3
	Natural or Physical Science Elective	4

Subtotal: 16

Arts and Humanities or Social Science, General Studies, Natural or Physical Science Electives: Electives must be selected from the Approved General Education Electives List for the AAS Degree (p. 56).

Total Credit Hours: 61

RESTAURANT MANAGEMENT

Field Code: F_AAS_HO3A

Campus: Larimer Campus

This degree offers courses that provide entry level management skills in the Restaurant Industry. The degree is designed to prepare students with the necessary skills and knowledge for careers in the various classifications of Restaurants. Students will participate in one industry related internship. During these courses, students receive applied experiences in both service and operational areas of Restaurant Management. Students take a nationally recognized test from the Education Foundation of the National Restaurant Association, if passed with a score of 75% or more students receive the ServSafe® Certification. Students must earn a "C" or above in all required courses applied to the degree program.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Students must consult with HOS program director before registering for HOS 280.

Required Courses

CUA 101	Food Safety and Sanitation	2
HOS 110	Introduction to Hospitality	3
HOS 120	Service Management	3
HOS 215	Training and Development	3
HOS 255	Hospitality HR Management	3
CUA 120	Wines and Spirits	2
CUA 125	Introduction to Foods	4
CUA 129	Center of the Plate	4
CUA 261	Cost Controls	3
CUA 262	Purchasing for the Hospitality Industry	3
HOS 280	Internship	3
		Subtotal: 33

Required Business Support Courses

ACC 121	Accounting Principles I	4
BUS 115	Introduction to Business	3
CIS 118	Introduction to PC Applications	3
MAN 225	Managerial Finance	3
		Subtotal: 13

Required General Education Courses

ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 107	Career Mathematics or higher	3
	Arts and Humanities or Social Science Elective	3
	General Studies Elective	3
	Natural or Physical Science Elective	4
		Subtotal: 16

Arts and Humanities or Social Science, General Studies, Natural or Physical Science Electives: Electives must be selected from the

Approved General Education Electives List for the AAS Degree (p. 56).

Total Credit Hours: 62

Hospitality and Culinary Arts Management - Certificates

CULINARIAN

Field Code: F_CER_HO1A

Campus: Larimer Campus

REQUIREMENTS

Required Courses

CUA 101	Food Safety and Sanitation	2
CUA 125	Introduction to Foods	4
CUA 129	Center of the Plate	4
CUA 145	Introduction to Baking	4
CUA 210	Adv Cuisine and Garde Manger	4
CUA 261	Cost Controls	3
CUA 262	Purchasing for the Hospitality Industry	3
		Subtotal: 24

Total Credit Hours: 24

EVENT PLANNING

Field Code: F_CER_HO4A

Campus: Larimer Campus

REQUIREMENTS

Required Courses

CIS 118	Introduction to PC Applications	3
CUA 120	Wines and Spirits	2
HOS 131	Planning for Special Events	3
HOS 141	Convention Management	3
HOS 210	Event Finances	3
HOS 255	Hospitality HR Management	3
MAN 225	Managerial Finance	3
MAN 230	Corporate Ethics & Social Resp or	3
MAR 111	Principles of Sales	3

Total Credit Hours: 23

RESTAURANT MANAGEMENT

Field Code: F_CER_HO3A

Campus: Larimer Campus

REQUIREMENTS

Required Courses

CUA 101	Food Safety and Sanitation	2
CUA 120	Wines and Spirits	2
CUA 125	Introduction to Foods	4
CUA 261	Cost Controls	3
CUA 262	Purchasing for the Hospitality Industry	3
HOS 255	Hospitality HR Management	3
MAN 225	Managerial Finance	3

Total Credit Hours: 20**HOTEL MANAGEMENT**

Field Code: F_CER_HO2A

Campus: Larimer Campus

REQUIREMENTS**Required Courses**

CIS 118	Introduction to PC Applications	3
CUA 261	Cost Controls	3
HOS 131	Planning for Special Events	3
HOS 141	Convention Management	3
HOS 242	Hotel Sales and Marketing	3
HOS 251	Hotel Operations	3
HOS 255	Hospitality HR Management	3
MAN 225	Managerial Finance	3

Total Credit Hours: 24**Interior Design****INTERIOR DESIGN - ASSOCIATE OF APPLIED SCIENCE DEGREE**

Field Code: F_AAS_IND

Campus: Larimer Campus, Westminster Campus

This program provides the student with an in-depth study of architecture, CAD, and interior design skills necessary for a career as an Interior Designer and/or Kitchen and Bath Designer, through the exploration of design concepts. Students enrolled in the program learn to develop creative abilities through the study of visual elements and principles of design. Students will learn to prepare design graphics through sketching, manual drafting, and computer-generated presentation drawings.

Successful completion of the AAS degree in Interior Design and the Kitchen and Bath Certificate at FRCC facilitates the educational requirements to become an eligible candidate to sit for the NCIDQ (National Council for Interior Design Qualification) examination to become a professional interior designer.

Successful completion of the Kitchen and Bath Certificate, accredited by the NKBA (National Kitchen and Bath Association) facilitates the minimum credits required for the student to become AKBD (Associate Kitchen and Bath Designer).

For more information on these educational routes, please contact Nowell Vincent at 970.204.8170.

REQUIREMENTS

Students are recommended to meet with an advisor prior to registration. The Larimer Campus advisor for Interior Design and Kitchen and Bath is Nowell Vincent, nowell.vincent@frontrange.edu (970-204-8170). Students who do not meet with an advisor prior to registration should take the following courses the first semester: AEC 101, IND 105, IND 107 and IND 113.

Required Courses

AEC 101	Basic Architectural Drafting	4
AEC 102	Residential Construction Drawing	4
AEC 121	Construction Materials and Systems	3
CAD 105	AutoCAD for Interiors	4

CAD 115	Sketchup or 3DS/MAX	3
CAD 219		3
CAD 224	Revit Architecture	3
IND 105	Introduction to Interior Design	3
IND 107	History of Interior Design	3
IND 113	Perspective & Rendering Techniques	3
IND 114	Space Planning	3
IND 120	Interior Design II - Space Planning and Human Factors	3
IND 200	Kitchen and Bath Design I	4
IND 220	Interior Design III - Materials, Details, Codes, & Specs	3
IND 225	Lighting Design	3
IND 231	Sustainable Design	3
IND 213	Portfolio Presentations	3

Subtotal: 52**Required General Education Courses**

	Arts and Humanities Elective from the AAS General Education Electives list	3
ENG 121	English Composition I or	3
ENG 131	Technical Writing I	3
MAT 107	Career Mathematics Social Science Elective Natural and Physical Sciences elective from the AAS General Education Electives List	3 3 3

Subtotal: 15**Other Suggested Courses:**

ART 138	Film Photography I	3
MGD 111	Adobe Photoshop I	3
AEC 123	Commercial Construction Drawings or	4
CAD 202	Computer-Aided Drafting/3D	3

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 67**KITCHEN AND BATH DESIGN - CERTIFICATE**

Field Code: F_CER_INDE

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

AEC 101	Basic Architectural Drafting	4
AEC 121	Construction Materials and Systems	3
CAD 105	AutoCAD for Interiors	4
IND 105	Introduction to Interior Design	3
IND 113	Perspective & Rendering Techniques	3
IND 114	Space Planning	3
IND 200	Kitchen and Bath Design I	4
IND 205	Professional Practice	2
IND 261	Advanced Kitchen and Bath Design	4
IND 280	Internship	4
Subtotal: 34		

Other Suggested Courses:

AEC 123	Commercial Construction Drawings	4
CAD 202	Computer-Aided Drafting/3D	3
CAD 224	Revit Architecture	3
MGD 111	Adobe Photoshop I	3

Total Credit Hours: 34**Interpreter Preparation****INTERPRETER PREPARATION - ASSOCIATE OF APPLIED SCIENCE DEGREE**

Field Code: F_AAS_IPP

Campus: Westminster Campus

This program prepares students for entry-level employment as sign language interpreters. Sign language interpretation involves bridging the communication gap between deaf and hearing consumers effectively, accurately, and impartially.

Students must apply for this program through the Interpreter Preparation Program. In order to be accepted into the program, students must demonstrate proficiency in ASL and English by:

1. Receiving a grade of "B" or above for both ASL 121 and ASL 122, or by passing the ASL 121 and ASL 122 proficiency tests at 80%, and
2. Receiving a grade of "B" or above for ENG 121 or ENG 122.

In addition, program requirements include demonstrated mastery of program skills. Therefore, students must receive a "B" or above in all ASL and IPP courses and at least a "C" in all other general education coursework.

Students who have received a grade of "C" in any of these ASL or IPP courses may repeat the courses to earn the grade of "B" or above, but may only repeat these courses once. Students who are unable to achieve a "B" by the second attempt in a class will be asked to withdraw from the program.

Only one re-admission to the program may be permitted after twice receiving a grade of "C" or lower in any ASL or IPP course.

Students who have discontinued the IPP program for two or more years may be required to re-take some courses that have been successfully completed due to curriculum changes.

By attending classes on a full-time basis, students may complete the program in two years. Educational standards for national certification requires a BA degree. FRCC has partnered with Regis University for full transfer of the AAS degree for a Bachelor of Applied Science (BAS) with a major of either Educational

Interpreting or Community Interpreting. Contact the Interpreter Preparation Program for further information.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin working on the prerequisites defined in items 1 and 2 above. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Required Courses

ASL 123	American Sign Language III	5
ASL 125	Fingerspelling	3
ASL 221	American Sign Language IV	3
ASL 222	American Sign Language V	3
ASL 244	Linguistics	3
IPP 115	Introduction to Language and Communication	3
IPP 121	Aspects of Interpreting I	3
IPP 122	Aspects of Interpreting II	3
IPP 125	Oral Transliterating	2
IPP 135	Introduction to Interpreting	3
IPP 145	Deaf People in Society	2
IPP 147	Survey of Deaf Culture	3
IPP 205	Educational Interpreting	4
IPP 225	English to ASL Interpreting	3
IPP 227	ASL to English Interpreting	3
IPP 229	Transliterating	3
IPP 235	Advanced Interpreting	4
IPP 278	Interpreter Seminar	2
IPP 282	Internship	6
Subtotal: 61		

Required General Education Courses

ANT 101	Cultural Anthropology	3
COM 115	Public Speaking	3
ENG 121	English Composition I or	3
ENG 122	English Composition II	3
	Any GT-MA1 course (3 credits or more)	3
	Natural and Physical Sciences or Humanities Elective	3
Subtotal: 15		

ENG 121 and ENG 122 grade of "B" or above is required

Natural & Physical Sciences or Humanities Elective: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56). ASL 121 and ASL 122 do not qualify as a Natural & Physical Sciences or Humanities elective for the IPP AAS degree.

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For

more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 76

Management

See Business Section (p. 69)

Manufacturing and Energy Technology

MANUFACTURING AND ENERGY TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_ELMC

Campus: Larimer Campus

The focus of this program is to prepare individuals for entry-level work in the growing clean energy industry, as well as careers in manufacturing and conventional energy. The program includes a one-year certificate that forms the basis for a two-year Associate of Applied Science Degree. The first year will focus on developing a fundamental set of skills that apply to the broad range of industries in the region. Skills include Energy and Manufacturing Fundamentals, Safety, Engineering Materials, Industrial print reading, AC/DC Electrical Fundamentals, Metrology, and Teamwork and Communications. Year two will provide students with the opportunity to broaden and apply these fundamental skills in a hands-on laboratory setting using industry-standard equipment and techniques.

Assessment testing is required for all students, although in some cases, recent transcripts or ACT/SAT test scores take the place of assessment testing. Students who place into CCR 093 or above and MAT 050 or above may apply to begin this program of study. Students scoring below this level should consult with FRCC advising before applying for this program of study. The above course prerequisites must be successfully completed before a student can apply for entry into this program.

The Manufacturing and Energy program website listed below has detailed information regarding applying for acceptance into the program.

All courses applied to the degree must be completed with a grade of "C" or above.

For more information, or to apply for the program, visit the Manufacturing and Energy Technology program website at www.frontrange.edu/energy or email cleanenergyinfo@frontrange.edu.

REQUIREMENTS

Required Core Courses

MTE 105	Safety for Manufacturing Environments	1
MTE 106	Print Reading for Manufacturing	3
MTE 130	Metrology	3
ELT 106	Fundamentals of DC/AC	4
ENY 161	Energy Industry Fundamentals	4
EGT 201	Engineering Materials	3
MTE 135	Lean Six Sigma	4
ELT 107	Fundamentals of Industrial Electronics	3
ELT 147	Digital Devices I	4

ENY 122	Wind Energy and Photovoltaics	3
PPT 105	Basic Plant Operation	2
PPT 116	Instrumentation and Control	3
ELT 205	Electronic Troubleshooting I	3
ELT 258	Programmable Logic Controllers	3
MTE 238	Industrial Fluid Power & Controls	3
MTE 280	Internship: Manufacturing	1
	or	
MTE 289	Manufacturing Capstone	1

Subtotal: 47

Required General Education Courses

COM 125	Interpersonal Communication	3
ENG 115	Technical English and Communication	3
MAT 108	Technical Mathematics	4
PHI 112	Ethics	3
PHY 105	Conceptual Physics with Lab	4

Subtotal: 17

Total Credit Hours: 64

MANUFACTURING AND ENERGY TECHNOLOGY - CERTIFICATE

Field Code: F_CER_CLET

Campus: Larimer Campus

REQUIREMENTS

Required Program Courses

ELT 106	Fundamentals of DC/AC	4
MTE 105	Safety for Manufacturing Environments	1
MTE 106	Print Reading for Manufacturing	3
MTE 130	Metrology	3
ENY 161	Energy Industry Fundamentals	4
EGT 201	Engineering Materials	3

Subtotal: 18

General Education Required Courses

COM 125	Interpersonal Communication	3
ENG 115	Technical English and Communication	3
MAT 108	Technical Mathematics	4
PHY 105	Conceptual Physics with Lab	4

Subtotal: 14

Total Credit Hours: 32

Marketing

See Business Section (p. 69)

Massage Therapy

Holistic Health Section (p. 96)

Medical Office Technology

This program is designed to prepare individuals for a career in the clinical and administrative functions of the health care system. All students become familiar with the law and ethics of the health care system and medical terminology. Each area includes an internship at a health care facility.

This program provides three AAS degree pathways: Medical Assisting (p. 109), Medical Administrative Assisting (p. 109), or Billing Specialist (p. 108).

All Medical Office Technology students:

- Assessment testing is required of all MOT students. ACT English of 18 or higher or SAT verbal score 440 or higher. Students who place into ENG 121 (or above) and MAT 107 (or above) may begin taking this program of study. A grade of "C" or above must be earned for each course required for all MOT degree and certificate programs.
- Complete online background check at Certified Background as directed by program director. See <http://cccs.certifiedbackground.com>.
- Ability to sufficiently speak and understand English and to comprehend verbal communication of English speaking clients.
- A grade of "C" or above must be earned for each course required for the degree or certificate.
- While high school graduation or GED are not required for enrollment in the MOT Certificate programs, students who take the National Certification exams must show evidence of high school graduation or GED in order to take National Certification exams.
- Students accepted into the Medical Office Technology program must meet the same health and safety requirements as the participating clinical facilities require of their own staff. Additional screening may be required for some clinical agencies. The expenses of these requirements are additional costs to the student.

Additional requirements for Medical Assisting students:

- Complete a health summary with documented immunization records. The health summary needs to be completed during the final semester. The health summary is provided by the program director. Please contact Kari Williams at 303-678-3833.
- Current CPR course; complete the American Heart Health Care Provider course and receive a 2-year recommended renewal date. The recommended renewal date must not expire prior to completion of the internship semester.

Medical Office Technology - Associate of Applied Science Degree Pathways

BILLING SPECIALIST

Field Code: F_AAS_MOB

Campus: Boulder County Campus

This degree pathway prepares individuals to work in an administrative role as a medical insurance billing specialist. Skills are developed in medical account management and in health care coding and billing for reimbursement.

REQUIREMENTS

Required Courses

ACC 101	Fundamentals of Accounting	3
	or	
ACC 121	Accounting Principles I	4
CIS 118	Introduction to PC Applications	3
HPR 106	Law and Ethics for Health Professions	2

HPR 137	Human Diseases	4
MOT 120	Medical Office Financial Management	3
MOT 130	Insurance, Billing and Coding	3
MOT 184	Billing Specialist Internship	4

MOT 184 may be taken for 3 credits if the student completed the career readiness component in a prior MOT internship (MOT 180-183). Students may apply 1 credit of their completed career readiness component to MOT 184 taken for 3 credits to satisfy the 4 credit requirement.

Choose 2 credits from the following

HPR 208	Medical Terminology For Health Professionals	2
	or	
HPR 178	Medical Terminology and	1
HPR 285	Independent Case Study	1

Subtotal: 24

HPR 178 may also be taken for 2 credit hours to fulfill this requirement.

Required General Education Courses

BIO 106	Basic Anatomy and Physiology	4
	or	
BIO 201	Human Anatomy and Physiology I with Lab	4
	and	
BIO 202	Human Anatomy and Physiology II with Lab	4
ENG 121	English Composition I	3
MAT 107	Career Mathematics	3
	or	
	higher MAT course	
PSY 101	General Psychology I	3
	or	
PSY 235	Human Growth and Development	3
	Arts and Humanities Elective (Spanish recommended)	3

Subtotal: 16

Arts & Humanities Elective: Electives must be selected from the Approved Electives Lists for the AAS degree (p. 56) or from the list of additional courses.

Electives

20 additional credits of electives must be selected from the Approved General Education Electives List for an A.A.S. Degree (p. 56) or from the following additional list:

ACC 121	Accounting Principles I	4
ACC 122	Accounting Principles II	4
BUS 115	Introduction to Business	3
BUS 216	Legal Environment of Business	3
BUS 217	Business Communication and Report Writing	3
BUS 226	Business Statistics	3
CIS 115	Introduction to Computer Information Systems	3

Subtotal: 20

Note: Electives must be selected from the Approved Electives Lists for the AAS degree (p. 56) or from the list of additional courses.

Total Credit Hours: 60

MEDICAL ADMINISTRATIVE ASSISTING

Field Code: F_AAS_MOAT

Campus: Boulder County Campus

This degree pathway prepares individuals to work in an administrative/secretarial role in a health care facility. Skills are developed in computer applications, written communication, medical office procedures, financial management, insurance billing, *International Classification of Diseases - 9th (ICD-9) and 10th (ICD-10) Edition*, and *Physicians Current Procedural Terminology (CPT) coding*, and transcribing medical reports. In addition, students learn basic human anatomy, physiology, and disease conditions.

REQUIREMENTS

Required Courses

CIS 118	Introduction to PC Applications	3
HPR 106	Law and Ethics for Health Professions	2
HPR 137	Human Diseases	4
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3
MOT 130	Insurance, Billing and Coding	3
MOT 132	Medical Transcription I	4
MOT 136	Introduction to Clinical Skills	2
MOT 181	Administrative Internship	3

MOT 181 may be taken for 2 credits if the student completed the career readiness component in a prior MOT internship (MOT 180-184). Students may apply 1 credit of their completed career readiness component to MOT 181 taken for 2 credits to satisfy the 3 credit requirement.

Choose 2 credits from the following

HPR 208	Medical Terminology For Health Professionals	2
	or	
HPR 178	Medical Terminology and	1
HPR 285	Independent Case Study	1

Subtotal: 30

HPR 178 may also be taken for 2 credit hours to fulfill this requirement.

Required General Education Courses

BIO 106	Basic Anatomy and Physiology	4
	or	
BIO 201	Human Anatomy and Physiology I with Lab	4
	and	
BIO 202	Human Anatomy and Physiology II with Lab	4
ENG 121	English Composition I	3
MAT 107	Career Mathematics	3
	or	

higher MAT course

PSY 101	General Psychology I	3
	or	
PSY 235	Human Growth and Development	3
	Arts and Humanities Elective	3
	(Spanish recommended)	

Subtotal: 16

Arts & Humanities Elective: Electives must be selected from the Approved Electives Lists for the AAS degree (p. 56) or from the list of additional courses.

Electives

15 additional credits of electives must be selected from the Approved General Education Electives List for an A.A.S. Degree or from the following additional list:

ACC 121	Accounting Principles I	4
ACC 122	Accounting Principles II	4
BUS 115	Introduction to Business	3
BUS 216	Legal Environment of Business	3
BUS 217	Business Communication and Report Writing	3
BUS 226	Business Statistics	3
CIS 115	Introduction to Computer Information Systems	3

Subtotal: 15

Note: Electives must be selected from the Approved Electives Lists for the AAS degree or from the list of additional courses.

Total Credit Hours: 61

MEDICAL ASSISTING

Field Code: F_AAS_MOTM

Campus: Boulder County Campus

This area is designed to prepare individuals to work in ambulatory health care facilities in both the administrative and clinical areas. Administrative skills are developed in the areas of medical office procedures, written communications, financial management, insurance billing, *International Classification of Diseases - 9th (ICD-9) and 10th (ICD-10) Edition*, and *Physicians Current Procedural Terminology (CPT) coding*. Clinical skills include assisting with physical examinations, diagnostic tests, and treatment procedures.

The Medical Assistant Program at Front Range Community College, Medical Office Technology department, working with all communities of interest, will provide quality outcomes based education and training in a secure environment conducive to learning in the cognitive (knowledge), affective (behavior), and psychomotor (skills) learning domains.

The Front Range Community College Medical Assisting program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of Medical Assisting Education Review Board (MAERB).

Commission of Accreditation of Allied Health Education Programs
1361 Park Street
Clearwater, FL 33756

727-210-2350

www.caahep.org

REQUIREMENTS

Required Courses

CIS 118	Introduction to PC Applications	3
HPR 106	Law and Ethics for Health Professions	2
HPR 137	Human Diseases	4
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3
MOT 130	Insurance, Billing and Coding	3
MOT 136	Introduction to Clinical Skills	2
MOT 138	Medical Assisting Laboratory Skills	4
MOT 140	Medical Assisting Clinical Skills	4
MOT 150	Pharmacology for Medical Assistants	3

MOT 183 Medical Assistant Internship 5
 MOT 183 may be taken for 4 credits if the student completed the career readiness component in a prior MOT internship (MOT 180-183). Students may apply 1 credit of their completed career readiness component to MOT 183 taken for 4 credits to satisfy the 5 credit requirement.

Choose 2 credits from the following

HPR 208	Medical Terminology For Health Professionals	2
	or	
HPR 178	Medical Terminology and	1
HPR 285	Independent Case Study	1

Subtotal: 39

HPR 178 may also be taken for 2 credit hours to fulfill this requirement.

Required General Education Courses

BIO 106	Basic Anatomy and Physiology	4
	or	
BIO 201	Human Anatomy and Physiology I with Lab	4
	and	
BIO 202	Human Anatomy and Physiology II with Lab	4
ENG 121	English Composition I	3
MAT 107	Career Mathematics or higher MAT course	3
PSY 101	General Psychology I	3
	Arts and Humanities Elective (Spanish recommended)	3

Subtotal: 16

Arts & Humanities Elective: Electives must be selected from the Approved Electives Lists for the AAS degree (p. 56) or from the list of additional courses.

Electives

6 additional credits of electives must be selected from the Approved General Education Electives List for an A.A.S Degree (p. 56) or from the following additional list:

ACC 121	Accounting Principles I	4
ACC 122	Accounting Principles II	4
BUS 115	Introduction to Business	3
BUS 216	Legal Environment of Business	3
BUS 217	Business Communication and Report Writing	3
BUS 226	Business Statistics	3
CIS 115	Introduction to Computer Information Systems	3

Subtotal: 6

Note: Electives must be selected from the Approved Electives Lists for the AAS degree (p. 56) or from the list of additional courses.

Total Credit Hours: 61

Medical Office Technology - Certificates

All Medical Office Technology students:

- Assessment testing is required of all MOT students. Students who place into ENG 121 (or above) and MAT 107 (or above) may begin taking this program of study. A grade of "C" or above must be earned for each course required for all MOT degree and certificate programs.
- Complete online background check at American DataBank as directed by program director. See <http://www.healthcareex.com/disqualifying-offenses.pdf> for a list of criminal offenses appearing on a criminal background check that will disqualify an applicant for admission to the Medical Office Technology program.
- Ability to sufficiently speak and understand English and to comprehend verbal communication of English speaking clients.
- A grade of "C" or above must be earned for each course required for the degree or certificate.
- While high school graduation or GED are not required for enrollment in the MOT Certificate programs, students who take the National Certification exams must show evidence of high school graduation or GED in order to take National Certification exams.

Additional requirements for Medical Assisting students:

- Complete a health summary with documented immunization records. The health summary needs to be completed during the final semester. The health summary is provided by the program director. Please contact Kari Williams at 303-678-3833.
- Current CPR/First Aid course; complete the American Heart Health Care Provider course and receive a 2-year recommended renewal date. The recommended renewal date must not expire prior to completion of the internship semester.

BILLING SPECIALIST

Field Code: F_CER_BLSP

Campus: Boulder County Campus

This certificate prepares individuals to work in an administrative role as a medical insurance billing specialist. Skills are developed

in medical account management and in health care coding and billing for reimbursement.

REQUIREMENTS

Required Courses

ACC 101	Fundamentals of Accounting	3
	or	
ACC 121	Accounting Principles I	4
BIO 106	Basic Anatomy and Physiology	4
	or	
BIO 201	Human Anatomy and Physiology I with Lab	4
	and	
BIO 202	Human Anatomy and Physiology II with Lab	4
CIS 118	Introduction to PC Applications	3
ENG 121	English Composition I	3
HPR 106	Law and Ethics for Health Professions	2
HPR 137	Human Diseases	4
MOT 120	Medical Office Financial Management	3
MOT 130	Insurance, Billing and Coding	3
MOT 184	Billing Specialist Internship	4
	or	
MOT 184	for 3 credits and 1 credit from MOT 180-183	

Choose 2 credits from the following sequences

HPR 208	Medical Terminology For Health Professionals	2
	or	
HPR 178	Medical Terminology	1
	or	
HPR 178	Medical Terminology and	1
	and	
HPR 285	Independent Case Study	1

Total Credit Hours: 31

HEALTH CARE OFFICE ASSISTING

Field Code: F_CER_MOTR

Campus: Boulder County Campus

This certificate is designed to prepare individuals to work in a health care facility as a receptionist. Upon successful completion, students are able to register new patients, use proper telephone techniques, schedule appointments, file medical records, process mail, and type and transcribe miscellaneous medical reports. Students use both manual and computerized systems to organize a medical office.

REQUIREMENTS

Required Courses

CIS 118	Introduction to PC Applications	3
ENG 121	English Composition I	3
HPR 106	Law and Ethics for Health Professions	2
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3

MOT 132	Medical Transcription I	4
MOT 136	Introduction to Clinical Skills	2
MOT 181	Administrative Internship	3
	or	
MOT 181	Administrative Internship and 1 credit from MOT 180-184	3

Choose 2 credits from the following sequences

HPR 208	Medical Terminology For Health Professionals	2
	or	
HPR 178	Medical Terminology	1
	or	
HPR 178	Medical Terminology and	1
	and	
HPR 285	Independent Case Study	1

Total Credit Hours: 26

MEDICAL ADMINISTRATIVE ASSISTING

Field Code: F_CER_MOTS

Campus: Boulder County Campus

This certificate is designed to prepare individuals to work in an administrative/secretarial role in a health care facility. Skills are developed in computer applications, written communication, medical office procedures, financial management, insurance billing, *International Classification of Diseases - 9th Edition (ICD-9)* and *Physicians Current Procedural Terminology (CPT) coding*, and transcribing medical reports. In addition, students learn basic human anatomy, physiology and disease conditions.

REQUIREMENTS

Required Courses

BIO 106	Basic Anatomy and Physiology	4
	or	
BIO 201	Human Anatomy and Physiology I with Lab	4
	and	
BIO 202	Human Anatomy and Physiology II with Lab	4
CIS 118	Introduction to PC Applications	3
ENG 121	English Composition I	3
HPR 106	Law and Ethics for Health Professions	2
HPR 137	Human Diseases	4
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3
MOT 130	Insurance, Billing and Coding	3
MOT 132	Medical Transcription I	4
MOT 136	Introduction to Clinical Skills	2
MOT 181	Administrative Internship	3
	or	
MOT 184	for 3 credits and 1 credit from MOT 180-184	
PSY 101	General Psychology I	3
	or	

PSY 235	Human Growth and Development	3
Choose 2 credits from the following sequences		
HPR 208	Medical Terminology For Health Professionals	2
	or	
HPR 178	Medical Terminology	1
	or	
HPR 285	Independent Case Study	1

Total Credit Hours: 40

MEDICAL ASSISTING

Field Code: F_CER_MED1

Campus: Boulder County Campus

This area is designed to prepare individuals to work in ambulatory health care facilities in both the administrative and clinical areas. Administrative skills are developed in the areas of medical office procedures, written communications, financial management, insurance billing, *International Classification of Diseases - 9th (ICD-9) and 10th (ICD-10) Edition*, and *Physicians Current Procedural Terminology (CPT) coding*. Clinical skills include assisting with physical examinations, diagnostic tests, and treatment procedures.

The Medical Assistant Program at Front Range Community College, Medical Office Technology department, working with all communities of interest, will provide quality outcomes based education and training in a secure environment conducive to learning in the cognitive (knowledge), affective (behavior), and psychomotor (skills) learning domains.

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Commission on Accreditation of Allied Health Education Programs
 1361 Park Street
 Clearwater, FL 33756
 727-210-2350
www.caahep.org

REQUIREMENTS

Required Courses

BIO 106	Basic Anatomy and Physiology	4
	or	
BIO 201	Human Anatomy and Physiology I with Lab	4
	and	
BIO 202	Human Anatomy and Physiology II with Lab	4
ENG 121	English Composition I	3
HPR 106	Law and Ethics for Health Professions	2
HPR 137	Human Diseases	4
MOT 110	Medical Office Administration	4
MOT 120	Medical Office Financial Management	3

MOT 130	Insurance, Billing and Coding	3
MOT 136	Introduction to Clinical Skills	2
MOT 138	Medical Assisting Laboratory Skills	4
MOT 140	Medical Assisting Clinical Skills	4
MOT 150	Pharmacology for Medical Assistants	3

MOT 183	Medical Assistant Internship	5
	or	
MOT 183	Medical Assistant Internship and 1 credit from MOT 180-184	5

PSY 101	General Psychology I	3
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Choose 2 credits from the following sequences

HPR 208	Medical Terminology For Health Professionals	2
	or	
HPR 178	Medical Terminology	1
	or	
HPR 178	Medical Terminology and	1
	and	
HPR 285	Independent Case Study	1

Total Credit Hours: 46

Multimedia Technology

Multimedia Technology - Associate of Applied Science Degree Pathways

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study. A grade of "C" or above must be earned for each course required for the degree.

DIGITAL ANIMATION

Field Code: F_AAS_MTA

Campus: Boulder County Campus, Westminster Campus

This degree prepares students for entry-level positions dealing with the production of interactive presentations, medical illustration, gaming, web animation and cartooning. Students develop a high level of technical proficiency through the use of multiple software programs for creating, composing, and displaying animation designs for various media. They also develop solid design skills through training in traditional graphic design concepts and the integration of design principles throughout the curriculum.

Core classes focus on helping students learn industry standard software in illustration, photo manipulation, web graphics, animation and 3D modeling, and digital video production. Electives allow students to focus on desired design skills to gain an understanding of the application of web design, digital video production, and specific drawing skills. Students work independently and in collaborative groups in the design and implementation of mixed media presentations and applications.

This degree requires the use of a computer for prolonged periods of time during class and lab, analytical and creative abilities, and basic computer skills to begin the program.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at the college level and place into CCR 093 or above and MAT 050 or above may begin this program of study.

Required Courses

MGD 102	Introduction to Multimedia or	3
MGD 117	Introduction to Visual Communications	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 133	Graphic Design I	3
MGD 143	Motion Graphic Design I	3
MGD 152	Digital Animatics	3
MGD 153	3D Animation I	3
MGD 165	After Effects I	3
MGD 167	Game Design I	3
MGD 211	Adobe Photoshop II	3
MGD 253	3D Animation II	3
MGD 268	Business for Creatives	3

Subtotal: 36**Required Elective Courses**

Select 9 credits from the following:

ART 127	Landscape Drawing I	3
ART 128	Figure Drawing I	3
ART 221	Drawing II	3
COM 115	Public Speaking	3
MGD 116	Typography I	3
MGD 121	Painter for Digital Media	3
MGD 134	Drawing for Illustrators	3
MGD 141	Web Design I	3
MGD 164	Digital Video Editing I	3
MGD 212	Adobe Illustrator II	3
MGD 241	Web Design II	3
MGD 243	Web Motion Graphic Design II	3
MGD 258	Web Design Production	3
MGD 264	Digital Video Editing II or any other MGD class(es)	3-9

Subtotal: 9**Required General Education Courses**

Select 3 credits from the English courses below:

ENG 121	English Composition I	3
ENG 122	English Composition II	3
ENG 131	Technical Writing I	3
ART 121	Drawing I	3
ART 131	Visual Concepts 2-D Design	3
MAT 107	Career Mathematics or higher math	3
	Natural and Physical Sciences or Social Science Elective	3

Subtotal: 15

Natural & Physical Sciences or Social Science Elective: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60**GRAPHIC DESIGN**

Field Code: F_AAS_MMP

Campus: Boulder County Campus, Westminster Campus

This degree prepares students for entry-level positions dealing with the production of interactive CDs, medical illustration, gaming, web animation, cartooning, and fashion illustration. Students develop a high level of technical proficiency through the use of multiple software programs for creating, composing, and displaying animation designs for various media. They also develop solid design skills through training in traditional graphic design concepts and the integration of design principles throughout the curriculum.

Core courses focus on assisting students in learning industry standard software in illustration, photo manipulation, 3D modeling, and pre-press skills needed for print. Program electives allow students to focus on specific design and software skills.

Students work independently, as well as in collaborative groups in the design and implementation of mixed media presentations and applications.

REQUIREMENTS

This degree requires the extensive use of a computer for prolonged periods of time during class and lab, analytical and creative abilities, and basic computer skills to begin the program.

Assessment testing is required for all students. Students who are reading at the college level and place into CCR 093 or above and MAT 050 or above may begin this program of study. A grade of "C" or above must be earned for each course required for the degree.

Required Courses

MGD 102	Introduction to Multimedia or	3
MGD 117	Introduction to Visual Communications	3
MGD 103	Production Design	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 114	Adobe InDesign	3
MGD 116	Typography I	3
MGD 133	Graphic Design I	3
MGD 202	Point of Purchase Package Design	3
MGD 203	Design and Concept	3
MGD 233	Graphic Design II	3
MGD 211	Adobe Photoshop II or	3
MGD 212	Adobe Illustrator II	3
MGD 256	Graphic Design Production or	3
MGD 268	Business for Creatives	3

Subtotal: 36**Required Elective Courses**

Select 9 credits from the following:

ART 111	Art History Ancient to Medieval	3
ART 112	Art History Renaissance to Modern	3
ART 207	Art History - 1900 to Present	3
ART 139	Digital Photography I or	3
ART 138	Film Photography I	3
ART 245	Digital Photo Studio or	3
ART 145	Digital Darkroom	3
COM 115	Public Speaking	3
JOU 221	Newspaper Design I	3
MAR 216	Principles of Marketing	3
MAR 220	Principles of Advertising	3
MGD 211	Adobe Photoshop II	3
MGD 212	Adobe Illustrator II or	3
	any other MGD class(es)	3-9

Subtotal: 9

Required General Education Courses

Select 3 credits from the English courses below:

ENG 121	English Composition I	3
ENG 122	English Composition II	3
ENG 131	Technical Writing I	3
ART 121	Drawing I	3
ART 131	Visual Concepts 2-D Design	3
MAT 107	Career Mathematics or higher math	3
	Natural and Physical Sciences or Social Science Elective	3

Subtotal: 15

Natural & Physical Sciences or Social Science Elective: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60

VIDEO PRODUCTION AND EDITING

Field Code: F_AAS_MGDV

Campus: Boulder County Campus, Westminster Campus

This degree prepares students for entry-level positions as videographer, video editor, web designers, and motion graphic artists. In addition to developing a high level of technical proficiency through the use of multiple software programs, students also develop traditional video and animation concepts and skills within the curriculum.

Core courses focus on assisting students in learning industry standard software in illustration, photo manipulation, web graphics, animation, sound, special effects, and digital video production. Electives allow students to focus on more specific design and software skills.

Students work independently as well as in collaborative groups in the design and implementation of mixed media presentations and applications.

REQUIREMENTS

This degree requires the extensive use of a computer for prolonged periods of time during class and lab, analytical and creative abilities, and basic computer skills to begin the program.

Assessment testing is required for all students. Students who are reading at the college level and place into CCR 093 or above and MAT 050 or above may begin this program of study. A grade of "C" or above must be earned for each course required for the degree.

Required Courses

MGD 102	Introduction to Multimedia or	3
MGD 117	Introduction to Visual Communications	3
MGD 104	Videography	3
MGD 111	Adobe Photoshop I	3
MGD 116	Typography I	3
MGD 141	Web Design I	3
MGD 163	Sound Design I	3
MGD 164	Digital Video Editing I	3
MGD 165	After Effects I	3
MGD 143	Motion Graphic Design I	3
MGD 264	Digital Video Editing II	3
MGD 204	Videography II	3
MGD 268	Business for Creatives	3

Subtotal: 36

Required Elective Courses

Select 9 credits from the following:

ART 111	Art History Ancient to Medieval	3
MAR 216	Principles of Marketing	3
MAR 220	Principles of Advertising	3
MGD 112	Adobe Illustrator I	3
MGD 211	Adobe Photoshop II	3
MGD 212	Adobe Illustrator II or	3
	any other MGD class(es)	3-9

Subtotal: 9

Required General Education Courses

Select 3 credits from the English courses below:

ENG 121	English Composition I	3
ENG 122	English Composition II	3
ENG 131	Technical Writing I	3
ART 121	Drawing I	3
ART 131	Visual Concepts 2-D Design	3
MAT 107	Career Mathematics or higher math	3
	Natural and Physical Sciences or Social Science Elective	3

Subtotal: 15

Natural & Physical Sciences or Social Science Elective: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60

WEB DESIGN

Field Code: F_AAS_MTW

Campus: Boulder County Campus, Westminster Campus

This degree prepares students for entry-level positions as web designers, digital artists, motion graphic artists, and graphic designers. In addition to developing a high level of technical proficiency through the use of multiple software programs, students also develop traditional graphic design concepts and skills within the curriculum.

Core courses focus on assisting students in learning industry standard software in illustration, photo manipulation, web graphics, animation and 3D modeling, and digital video production. Electives allow students to focus on more specific design and software skills.

Students work independently as well as in collaborative groups in the design and implementation of mixed media presentations and applications.

REQUIREMENTS

This degree requires the extensive use of a computer for prolonged periods of time during class and lab, analytical and creative abilities, and basic computer skills to begin the program.

Assessment testing is required for all students. Students who are reading at the college level and place into CCR 093 or above and MAT 050 or above may begin this program of study. A grade of "C" or above must be earned for each course required for the degree.

Required Courses

MGD 102	Introduction to Multimedia or	3
MGD 117	Introduction to Visual Communications	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 133	Graphic Design I	3
MGD 141	Web Design I	3
MGD 143	Motion Graphic Design I	3
MGD 164	Digital Video Editing I	3
MGD 211	Adobe Photoshop II	3
MGD 241	Web Design II	3
MGD 243	Web Motion Graphic Design II	3
MGD 258	Web Design Production	3
MGD 268	Business for Creatives	3

Subtotal: 36

Required Elective Courses

Select 9 credits from the following:

ART 112	Art History Renaissance to Modern	3
COM 115	Public Speaking	3
CSC 240	Java Programming	3
CWB 110	Complete Web Authoring	3
CWB 205	Client-Side Scripting: (Software)	3
MAR 216	Principles of Marketing	3

MAR 217	E-Commerce Marketing	3
MAR 220	Principles of Advertising	3
MAR 222	Implementing E-Commerce	3
MGD 114	Adobe InDesign	3
MGD 116	Typography I	3
	or	
	any other MGD class(es)	3-9

Subtotal: 9

Required General Education Courses

Select 3 credits from the English courses below:

ENG 121	English Composition I	3
ENG 122	English Composition II	3
ENG 131	Technical Writing I	3

ART 121	Drawing I	3
ART 131	Visual Concepts 2-D Design	3

MAT 107	Career Mathematics or higher math	3
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	Natural and Physical Sciences or Social Science Elective	3
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Subtotal: 15

Natural & Physical Sciences or Social Science Elective: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Total Credit Hours: 60

Multimedia Technology - Certificates

Students may earn certificates in animation, digital imaging, graphic design, multimedia general, multimedia print/presentation, and multimedia web. While software use and design principles are included in the certificate, entry-level positions may require additional design training.

These certificates require the extensive use of a computer for prolonged periods of time during class and lab, analytical and creative abilities, and basic computer skills to begin the program.

Assessment testing is required for all students. Students who are reading at the college level and place into CCR 093 or above and MAT 050 or above may begin this program of study. A grade of "C" or above must be earned for each course required for the degree.

DIGITAL ANIMATION

Field Code: F_CER_MMA

Campus: Boulder County Campus, Westminster Campus

REQUIREMENTS

Required Courses

MGD 102	Introduction to Multimedia or	3
MGD 117	Introduction to Visual Communications	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 152	Digital Animatics	3
MGD 167	Game Design I	3

MGD 211	Adobe Photoshop II	3
MGD 253	3D Animation II	3
MGD 268	Business for Creatives	3
MGD 153	3D Animation I or	3
MGD 143	Motion Graphic Design I	3
MGD 165	After Effects I or	3
MGD 143	Motion Graphic Design I	3

Total Credit Hours: 30

DIGITAL IMAGING

Field Code: F_CER_MMMDI

Campus: Larimer Campus

This certificate is designed for entry-level positions in digital photo labs, newspaper photo departments, and graphic design production.

REQUIREMENTS

Required Courses

ART 138	Film Photography I or	3
ART 139	Digital Photography I	3
ART 139	Digital Photography I or	3
ART 239	Digital Photography II	3
ART 145	Digital Darkroom or	3
ART 245	Digital Photo Studio	3
ART 140	Color Photography I	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 117	Introduction to Visual Communications or	3
MGD 102	Introduction to Multimedia	3
MGD 133	Graphic Design I or	3
MGD 114	Adobe InDesign	3
MGD 211	Adobe Photoshop II	3
MGD 268	Business for Creatives	3

Total Credit Hours: 30

GRAPHIC DESIGN TECHNICIAN

Field Code: F_CER_GRD1

Campus: Larimer Campus

This certificate is designed for entry-level positions in print production, graphic design, and newspaper production.

REQUIREMENTS

Required Courses

ART 121	Drawing I	3
ART 131	Visual Concepts 2-D Design	3
ART 138	Film Photography I or	3
ART 139	Digital Photography I	3
MGD 133	Graphic Design I or	3
MGD 114	Adobe InDesign	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 116	Typography I	3
MGD 211	Adobe Photoshop II	3
MGD 233	Graphic Design II	3
MGD 268	Business for Creatives	3

Total Credit Hours: 30

MULTIMEDIA

Field Code: F_CER_MMTG

Campus: Boulder County Campus, Westminster Campus

REQUIREMENTS

Required Courses

MGD 102	Introduction to Multimedia or	3
MGD 117	Introduction to Visual Communications	3
MGD 103	Production Design	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 114	Adobe InDesign	3
MGD 141	Web Design I	3
MGD 211	Adobe Photoshop II	3
MGD 212	Adobe Illustrator II	3
MGD 143	Motion Graphic Design I or	3
MGD 153	3D Animation I	3
MGD 256	Graphic Design Production or	3
MGD 268	Business for Creatives	3

Total Credit Hours: 30

GRAPHIC DESIGN

Field Code: F_CER_MMMP

Campus: Boulder County Campus, Westminster Campus

REQUIREMENTS

Required Courses

MGD 103	Production Design	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 114	Adobe InDesign	3

MGD 116	Typography I	3
MGD 133	Graphic Design I	3
MGD 211	Adobe Photoshop II	3
MGD 212	Adobe Illustrator II	3
MGD 203	Design and Concept	3
MGD 256	Graphic Design Production or	3
MGD 268	Business for Creatives	3

Total Credit Hours: 30

VIDEO PRODUCTION AND EDITING

Field Code: F_CER_VDO

Campus: Boulder County Campus, Westminster Campus

REQUIREMENTS

Required Courses

MGD 104	Videography	3
MGD 111	Adobe Photoshop I	3
MGD 116	Typography I	3
MGD 143	Motion Graphic Design I	3
MGD 163	Sound Design I	3
MGD 164	Digital Video Editing I	3
MGD 165	After Effects I	3
MGD 204	Videography II	3
MGD 243	Web Motion Graphic Design II	3
MGD 264	Digital Video Editing II	3

Total Credit Hours: 30

WEB DESIGN

Field Code: F_CER_MMMW

Campus: Boulder County Campus, Westminster Campus

REQUIREMENTS

Required Courses

MGD 102	Introduction to Multimedia or	3
MGD 117	Introduction to Visual Communications	3
MGD 111	Adobe Photoshop I	3
MGD 112	Adobe Illustrator I	3
MGD 141	Web Design I	3
MGD 143	Motion Graphic Design I	3
MGD 164	Digital Video Editing I	3
MGD 211	Adobe Photoshop II	3
MGD 241	Web Design II	3
MGD 243	Web Motion Graphic Design II	3
MGD 258	Web Design Production or	3
MGD 268	Business for Creatives	3

Total Credit Hours: 30

Nursing

Colorado Board of Nursing

The Front Range Community College Nursing Programs have Continuing Full Approval from the Colorado Board of Nursing.

Accreditation Commission for Education in Nursing, Inc.

3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326
www.acenursing.org 404-975-5000

Larimer Campus, Westminster Campus, and Boulder County Campus Nursing Programs are accredited by the Accreditation Commission for Education in Nursing (ACEN).

NURSING - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_NR1

Campus: Larimer Campus, Westminster Campus

This program prepares students for entry-level professional nursing practice as a registered nurse. The nursing program is a two-year curriculum. Registered nurses function in a variety of roles: provider of care and manager of care in various health care settings including acute care hospitals, long term care settings, and community settings such as clinics, home health and health maintenance organizations. As a member of this discipline of nursing, registered nurses practice within the scope of practice as outlined in the Colorado Nurse Practice Act. Many students pursue a baccalaureate or master's degree after completion of an associate degree in nursing. Graduates of the nursing program are eligible for advanced placement into baccalaureate nursing programs through the Colorado Articulation Model. More advanced positions usually require advanced degrees. Military commissioned status after graduation has special requirements. Contact an advisor for further information.

Upon successful completion of the nursing program, the student is awarded an AAS degree in Nursing. Graduates are eligible to submit an application to complete the NCLEX® exam for licensure as a registered nurse. The Front Range Community College associate of applied science degree is approved by the Colorado Board of Nursing and accredited by the ACEN.

The program offers a PN "exit option" course at the completion of the first year. This is for students who would like to complete the requirements to be eligible to apply for the PN NCLEX®. Students completing NUR 169 and the first year of the nursing program may apply for the NCLEX® exam for practical nursing licensure.

Assessment testing is required of all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member or academic advisor before registering for courses in this program of study.

Minimum Requirements for Nursing Program Application:

1. Completion of all admission pre-requisite course work.

If a student is transferring prerequisite courses from another college, the courses must be evaluated by the Office of Admissions and Records at the college the student plans to attend.

- ENG 121 English Composition I
- PSY 235 Human Growth and Development

- BIO 201* Human Anatomy and Physiology I
- BIO 202* Human Anatomy and Physiology II. Larimer Campus requires HPR 108 - Dietary Nutrition instead of BIO 202. Westminster Campus will accept either BIO 202 or HPR 108 for competitive entry.
- BIO 204* Microbiology

**Must be completed within seven years prior to entry into the Nursing Program*

Students must receive a grade of "C" or above and a cumulative GPA of 2.75 or higher on prerequisite courses listed above.

Students must have an **overall** cumulative GPA of 2.0 or higher for previous courses completed at FRCC.

Please review the prerequisites for MAT 103, which must be taken in the first semester of the program. Students must have satisfied the prerequisites for MAT 103 before starting the program but should not take the course until starting the nursing program.

2. Ability to sufficiently speak and understand English and to comprehend verbal communication of English speaking clients and healthcare team members.

3. Ability to meet physical and cognitive technical standards described in nursing program policies.

Note: To maintain a position in the program after starting nursing courses, students must be continually enrolled and complete all required courses in sequence with a grade of "C" or above. Only one re-entry to an FRCC nursing program is allowed after a student receives a "D," "F," or "W" grade in a nursing course or withdraws with a "D," "F" or "W" from a nursing course.

Upon successful completion of the nursing program, students receive an associate of applied science degree and are eligible to apply to the Board of Nursing for permission to take the NCLEX exam for licensure as a registered nurse.

REQUIREMENTS

Required Nursing Courses

NUR 106	Medical Surgical Nursing Concepts	7
NUR 109	Fundamentals of Nursing	6
NUR 112	Basic Concepts of Pharmacology	2
NUR 150	Maternal Child Nursing	6
NUR 206	Advanced Concepts of M/S Nursing I	6.5
NUR 211	Psychiatric-Mental Health Nursing	4
NUR 212	Pharmacology	2
NUR 216	Advanced Concepts of M/S Nursing II	5
NUR 230	Transition to Professional Nursing Practice	4

Subtotal: 42.5

Required General Education Courses

BIO 201	Human Anatomy and Physiology I with Lab	4
BIO 202	Human Anatomy and Physiology II with Lab	4
BIO 204	Microbiology with Lab	4
BIO 216	Pathophysiology	4
ENG 121	English Composition I	3
HPR 108	Dietary Nutrition	1

	or	
HWE 100	Human Nutrition	3
MAT 103	Math for Clinical Calculations	3
PSY 235	Human Growth and Development	3
	Elective: GT Arts and Humanities or Social and Behavioral Science	3

Subtotal: 29

Application Process for AAS Degree

Please contact a Nursing Department Representative at the campus of your choice for information on the nursing program application process prior to submitting a program application. Westminster Campus anticipates accepting applications for spring 2016 admission, however, all eligible waitlisted students will be accommodated prior to initiating the application admission process.

Applications are accepted one semester prior to admission. Larimer Campus requires the HESI A-2 nurse entrance exam with a minimum cumulative score of 75%. Subject areas are Reading Comprehension, Math, Biology and Chemistry. Students may obtain up-to-date information on the admission process at a nursing information session. Westminster sessions are held on the second Wednesday of each month (except no meetings in July or December) at 6:00 pm in room B0353 or contact by e-mail at wcnursing@frontrange.edu. Larimer sessions are held the second Monday of each month at 5:00 pm in room BP126 or contact by e-mail at lccnursing@frontrange.edu.

1. Completion of an online background check and drug screening. See <http://cccs.certifiedbackground.com> (under FRCC) for a list of criminal offenses appearing on a criminal background check that will disqualify an applicant for admission to a CCCS nursing program.
2. Students accepted into the nursing program must meet the same health and safety requirements as the participating clinical facilities require of their own staff. Additional screening may be required for some clinical agencies. The expenses of these requirements are additional costs to the student.
3. Completion of a health summary with documented immunization records.
4. Current CPR Certification - Completion of the American Heart Health Care Provider course and receive a two-year recommended renewal date. The recommended renewal date must not expire prior to completion of the semester and must remain current throughout the nursing program.

Total Credit Hours: 71.5

PRACTICAL NURSING - EXIT OPTION - CERTIFICATE

Field Code: F_CER_PN1

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS

The Practical Nursing - Exit Option certificate is designed for students who would like to complete the requirements to be eligible to apply for the PN NCLEX®. Students completing NUR 169 and the first year of the nursing program may apply for the NCLEX® exam for practical nursing licensure.

Required Nursing Courses

NUR 106	Medical Surgical Nursing Concepts	7
NUR 109	Fundamentals of Nursing	6
NUR 112	Basic Concepts of Pharmacology	2
NUR 150	Maternal Child Nursing	6
NUR 169	Transition into Practical Nursing	4

Subtotal: 25.0**Required General Education Courses**

BIO 201	Human Anatomy and Physiology I with Lab	4
BIO 202	Human Anatomy and Physiology II with Lab	4
BIO 204	Microbiology with Lab	4
ENG 121	English Composition I	3
HPR 108	Dietary Nutrition or	1
HWE 100	Human Nutrition	3
MAT 103	Math for Clinical Calculations	3
PSY 235	Human Growth and Development	3

Subtotal: 22.0**Total Credit Hours: 47.0****NURSING ADVANCED PLACEMENT-BRIDGE PROGRAM (LPN TO ADN)**

Field Code: F_AAS_NR5

Campus: Boulder County Campus

The nursing program offers an advanced placement option. This program is for students who are licensed as a practical nurse in Colorado. Advanced placement through transfer, the Colorado Nursing Articulation Model, is available to licensed practical nurses and students from other schools.

Boulder County campus offers the Advanced Placement Program as a cohort of twenty-four (24) students each summer.

Information regarding the Boulder County Campus nursing programs may be obtained by email at bccnursing@frontrange.edu.

Requirements for LPN to ADN Bridge Program Admission:

Entry into the LPN-to-ADN Bridge Program is based on a competitive admission process that utilizes scores from a preadmission assessment examination, grade point averages from science prerequisites and prior nursing coursework, and whether a previous degree has been earned. Students who successfully complete the BCC Professional Nursing Pathway Program may be given priority for admission. Preadmission assessment exams are offered during the semester prior to the beginning of NUR 189 in summer semester. Students must have completed requirements for Bridge Program admission. (However, students may be currently enrolled in some prerequisite courses if they will be satisfactorily completed prior to the beginning of NUR 189.) Students wishing to sit for the preadmission assessment examination must submit an application attesting to completion (or near completion) of requirements. Contact department for policy regarding transferring from another Bridge or ADN program.

Qualified students will be provided with dates and times that they may take the preadmission assessment at Boulder County Campus.

Preadmission assessment scores will be shared with applicants. If appropriate, suggestions will be given regarding how to improve in weaker areas. Students may retake the entire preadmission assessment exam again once, after six months (contact department for policy); the most current scores will be used for the competitive admission process.

The following are requirements for admission to the Bridge Program:

1. A current Colorado LPN license in good standing.
2. If transferring classes to FRCC, completion of a "Transfer Credit Evaluation Form" (Department of Admissions and Records)
3. Proof of completion of the following prerequisites with a grade of "C" or above on each course and a cumulative GPA of 2.75 for these courses.
 - ENG 121 English Composition I
 - BIO 201* Human Anatomy and Physiology I
 - BIO 202* Human Anatomy and Physiology II
 - BIO 204* Microbiology
 - PSY 235 Human Growth and Development
 - BIO 216* Pathophysiology
 - HPR 108 Dietary Nutrition or HWE 100 Human Nutrition
 - MAT 103 Math for Clinical Calculations

** Science courses must have been completed within seven years of entry into the second year of the nursing program to be eligible for transfer approval. .*

1. LPNs who have earned their certificate after more than 10 years prior to entry into the second year of the nursing program are required to take specified standardized exams for the first year of nursing credit, as specified by the Colorado Nursing Articulation Model.
2. Students must complete an online background check as directed by a nursing representative within 90 days prior to admission. See www.healthcareex.com for a list of criminal offenses appearing on a criminal background check that will disqualify an applicant for admission to a CCCS nursing program.
3. Complete a health summary with documented records for required immunizations or titers (just prior to entrance into the nursing program).
4. Complete the American Heart Association Health Care Provider course and receive a two-year recommended renewal date. The recommended renewal date must not expire prior to completion of the semester and must remain current throughout the nursing program.
5. Ability to speak, read, write and understand English to communicate sufficiently with patients and health-care team.
6. Students accepted into the nursing program must meet the same health and safety requirements as the participating

clinical facilities require of their own staff. Additional screening may be required for some clinical agencies. The expenses of these requirements are additional cost to students.

7. Other requirements and expectations are contained within the FRCC Nursing Handbook (including the REQUIRED STANDARDS POLICY).

Note: Upon successful completion of the nursing program, students receive an associate of applied science degree and are eligible to apply to take the NCLEX® RN exam for licensure as a registered nurse.

To maintain a position in the program after starting nursing courses, students must be continually enrolled and complete all core nursing courses in sequence, as well as maintain a grade of C or above in all courses.

REQUIREMENTS

Only one re-entry to an FRCC nursing program is allowed after a student receives a "D," "F," or "U" grade in a nursing course or withdraws from a nursing course.

Required Nursing Courses

NUR 189	Transition from Licensed Practical Nurse to Associate Degree Nursing Student	4
NUR 206	Advanced Concepts of M/S Nursing I	6.5
NUR 211	Psychiatric-Mental Health Nursing	4
NUR 212	Pharmacology	2
NUR 216	Advanced Concepts of M/S Nursing II	5
NUR 230	Transition to Professional Nursing Practice	4

Subtotal: 25.5

Required General Education Courses

BIO 201	Human Anatomy and Physiology I with Lab	4
BIO 202	Human Anatomy and Physiology II with Lab	4
BIO 204	Microbiology with Lab	4
BIO 216	Pathophysiology	4
ENG 121	English Composition I	3
HPR 108	Dietary Nutrition or	1
HWE 100	Human Nutrition	3
MAT 103	Math for Clinical Calculations	3
PSY 235	Human Growth and Development	3
	Elective: GTE Humanities or Social Behavioral Science	3

Subtotal: 29

(in addition to credits transferred in from LPN program): **54.5**

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For

more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 54.5

PRACTICAL NURSING - CERTIFICATE

Field Code: F_CER_NR4

Campus: Boulder County Campus

The Boulder County Campus offers a Practical Nursing program that is designed to prepare students to function as practical nurses. Employment opportunities are found in numerous health care organizations. Graduates of this program receive a certificate in practical nursing and are eligible to apply for the National Council Licensing Examination, Practical Nursing NCLEX®-PN for licensure to practice as an LPN. The practical nursing program is a one-year full-time program of study (two semesters).

The program's competitive admission process utilizes scores from a preadmission assessment examination given periodically at Boulder County Campus. (Students who successfully complete the BCC Professional Nursing Pathway Program may be given priority for admission.) Students must have completed requirements for Practical Nursing Program admission. (However, students may be currently enrolled in some prerequisite courses if they will be satisfactorily completed prior to program start.) Students wishing to sit for the preadmission assessment examination must submit an application attesting to completion (or near completion) of requirements. Students may retake the entire preadmission assessment exam once, after six months (contact department for policy); the most current scores will be used for the competitive admission process.

Contact department for policy regarding transferring from another nursing program.

Front Range Community College's Practical Nursing program is approved by the Colorado Board of Nursing and accredited by the Accreditation Commission for Education in Nursing, Inc., 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326 www.acenursing.org

Admission Process for Practical Nursing Certificate

Students should consult with a Nursing Advisor before applying to the program.

All prerequisites must be completed before the student will be admitted into the practical nursing program and given a program start date. In addition, the following are required for admission:

- Required Basic Skill Assessment Scores - Students must complete MAT 050 or MAT 055 at FRCC or a college-level mathematics course from a regionally accredited college or university.) Science: department standard.
- Prerequisite courses must be completed with a Grade of "C" or above and a cumulative GPA of 2.75 :
- BIO 106* Basic Anatomy and Physiology (or students may choose both BIO 201* Human Anatomy and Physiology I and BIO 202* Human Anatomy and Physiology II). Note: *Must be completed within seven years prior to entry into the nursing program.

- ENG 121 English Composition I
 - HPR 108 Dietary Nutrition (or HWE 100 Human Nutrition)
 - If transferring classes to FRCC, completion of a "Transfer Credit Evaluation Form" (Department of Admissions and Records)
1. Students must complete an online background check as directed by a nursing representative within 90 days prior to admission. See www.healthcareex.com for a list of criminal offenses appearing on a criminal background check that will disqualify an applicant for admission to a CCCS nursing program.
 2. Current CPR Course - Completion of the American Heart Health Care Provider course - "C" - which must remain current throughout the nursing program.
 3. Complete a health summary with documented records for required immunizations or titers (prior to clinical experience)
 4. Students accepted into the nursing program must meet the same health and safety requirements as the participating clinical facilities require of their own staff. Additional screening may be required for some clinical agencies. The expenses of these requirements are additional to the students.
 5. A urine drug screen will be required for PN students the semester of their first clinical experience.
 6. Other requirements and expectations are contained within the FRCC Nursing Handbook (including the Required Standards Policy).
 7. Ability to speak, read, write, and understand English to communicate sufficiently with patients and health-care team.

Only one re-entry to the Practical Nursing program is provided after receiving a "D," "F," "U" or "W" grade in a required NUR course. In order to graduate from this program, students must earn a grade of "C" or above in all courses required for the certificate.

REQUIREMENTS

Required Nursing Courses

NUR 101	Pharmacology Calculations	1
NUR 102	Alterations in Adult Health I	4
NUR 103	Health Assessment for the Practical Nurse	1
NUR 104	Alterations in Adult Health II	5
NUR 105	Practical Nursing Arts and Skills	6
NUR 110	Pharmacology for Practical Nursing	3
NUR 111	Advancement into Practical Nursing	1
NUR 113	Basic Concepts of Obstetric Nursing	2
NUR 114	Basic Concepts of Pediatric Nursing	2
NUR 115	Basic Concepts of Mental Health Nursing	1
NUR 116	Basic Concepts of Geriatric Nursing	1
NUR 131	Clinical I: Application of Practical Nursing Arts & Skills	3
NUR 132	Clinical II: Application of Adult Health	2
NUR 133	Clinical III: Application of Basic Concepts of Maternal-Newborn & Pediatric Nursing	1

NUR 134	Clinical IV: Advanced Applications in Adult Health	3
		Subtotal: 36

Required General Education Courses

BIO 106	Basic Anatomy and Physiology	4
or		
BIO 201	Human Anatomy and Physiology I with Lab	4
and		
BIO 202	Human Anatomy and Physiology II with Lab	4
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ENG 121	English Composition I	3
		Subtotal: 7

Elective Courses

HPR 108	Dietary Nutrition	1
or		
HWE 100	Human Nutrition	3

Total Credit Hours: 44

NURSE AIDE - CERTIFICATE

Field Code: F_CER_NR3

Campus: Loveland, Westminster Campus

This certificate program provides students with entry-level skills required for employment as a Nurse's Aide in a variety of settings, which may include long-term care, acute care, hospice or home health care. Not all of the patients a Nurse Aide cares for are elderly, but the special needs of the geriatric population are an emphasis of the Nurse Aide training program at FRCC. A grade of "C" or above is required to be successful in all certificate courses. This certificate qualifies students to take the State Certification Examination to become a Certified Nurse Aide (C.N.A.).

All students are required to submit and pass a specific criminal background check to attend the clinical (NUA 170), prior to the clinical dates. Disqualifying Offenses that may fail a background check include, but are not limited to: physical abuse or domestic violence, theft, illegal use of weapons, or illegal use or possession of controlled substances. Students will be required to have immunizations to meet O.S.H.A. guidelines including current negative TB test and a current seasonal flu shot during fall and spring semesters. Some clinical facilities may require additional immunizations. Contact the Nurse Aide Office on each individual campus for information on beginning the background check or information on disqualifying offenses, or for specific campus requirements for the NUA classes.

The Larimer campus has a paperwork packet that is available to students once class begins on D2L.

The Westminster campus has a campus-specific Nurse Aide Information Packet, which is due two weeks prior to the start of class. This packet is distributed at a required Nurse Aide Information meeting. Please contact Rebecca, at the Westminster Campus, for meeting times and locations. 303-404-5208

REQUIREMENTS

Required Courses

NUA 101	Certified Nurse Aide Health Care Skills	4
NUA 170	Nurse Aide Clinical Experience	1

Gainful Employment Disclosure Information

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Total Credit Hours: 5

Paralegal Studies

PARALEGAL/LEGAL ASSISTANT - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_PAR

Campus: Larimer Campus, Westminster Campus, Online Learning

This degree is designed for individuals who are seeking a career in the legal profession as a legal assistant/paralegal. Paralegals work under the supervision of an attorney and their work includes preparing legal documents, researching and compiling information, and communicating with clients. Paralegals are not authorized to practice law under any circumstances. Excellent written and oral communication skills, as well as computer literacy skills, are important to the paralegal. This program allows for technical training in the paralegal field and to work effectively with computers and legal research.

Courses in this program are offered online and in the classroom. Classroom courses are offered at both the Westminster and Larimer campuses. Classes are offered Fall, Spring and Summer semesters. Students must be computer literate and knowledgeable about the internet.

In addition, the program provides the opportunity for students and current paralegals who wish to upgrade existing job skills or those who are seeking a career change.

REQUIREMENTS

Assessment testing is required for all students. Students who place into ENG 121 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

All courses in the degree and certificates must be completed with a "C" or above to graduate.

Required Courses

PAR 115	Introduction to Law	3
PAR 116	Torts	3
PAR 118	Contracts	3
PAR 125	Property Law	3
PAR 127	Legal Ethics	3
PAR 201	Civil Litigation	3

PAR 206	Business Organizations	3
PAR 211	Legal Research	3
PAR 212	Legal Writing	3
PAR 219	E-Discovery and Litigation Technology	3
PAR 289	Capstone	3

Subtotal: 33

Required Courses Electives

Select any three PAR courses found in this catalog. Available courses are listed below:

PAR 117	Family Law	3
PAR 126	Administrative Law	3
PAR 202	Evidence	3
PAR 205	Criminal Law	3
PAR 208	Probate and Estates	3
PAR 209	Constitutional Law	3
PAR 215	Alternative Dispute Resolution	3
PAR 216	Employment Law	3
PAR 217	Environmental Law	3
PAR 218	Bankruptcy Law	3
PAR 227	Immigration Law	3
PAR 228	Intellectual Property	3

Subtotal: 9

Required General Education Courses

COM 115	Public Speaking	3
ENG 121	English Composition I	3
ENG 122	English Composition II	3
MAT 107	Career Mathematics or higher MAT course	3
POS 111	American Government Natural and Physical Sciences or Arts and Humanities elective selected from the GT courses	3

Subtotal: 18

Gainful Employment Disclosure Information

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Total Credit Hours: 60

PARALEGAL/LEGAL ASSISTANT - CERTIFICATE

Field Code: F_CER_LGA2

Campus: Larimer Campus, Westminster Campus, Online Learning

This certificate is designed for individuals who are seeking a career in the legal profession as a legal assistant/paralegal. This certificate allows for technical training in the paralegal field and to work effectively with computers and legal research. Courses in this program are offered online and in the classroom. Courses

in this program are offered Fall, Spring and Summer semesters. All students enrolled in the program must be computer literate and knowledgeable about the Internet.

REQUIREMENTS

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Required Courses

ENG 121	English Composition I	3
PAR 115	Introduction to Law	3
PAR 201	Civil Litigation	3
PAR 206	Business Organizations	3
PAR 211	Legal Research	3
PAR 212	Legal Writing	3
PAR 219	E-Discovery and Litigation Technology	3
PAR 289	Capstone	3
		Subtotal: 24

Required Elective Courses

Select any two PAR courses found in this catalog. The courses listed below also satisfy AAS degree requirements:

PAR 116	Torts	3
PAR 118	Contracts	3
PAR 125	Property Law	3
PAR 127	Legal Ethics	3
		Subtotal: 6

Total Credit Hours: 30

Pharmacy Technician

PHARMACY TECHNICIAN - CERTIFICATE

Field Code: F_CER_PHT2

Campus: Westminster Campus

Assessment testing is required for all students. Students who place into CCR 092 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

This certificate prepares students to assist pharmacists with the technical tasks in community and hospital pharmacy settings, as well as several additional settings. Pharmacy technicians currently in the field may upgrade their skills and meet continuing education recertification requirements by enrolling in specific program courses.

The curriculum is in a modular format consisting of three five-week instructional modules. Two modules of experiential practice follow the three modules in the following semester. Students may enter the program either in the fall or spring semester. This program is accredited by the American Society of Health System Pharmacists (ASHP).

Additional expenses incurred during the PHT program may include identification badges, books, lecture notes, scrubs (for institutional rotation and lab courses) lab coat (for community rotation), criminal background check, 10-panel drug screen, BLS

certification from an AHA advisor, and immunizations prior to clinical rotations.

Program Admission Requirements:

1. Completion of the PHT program application for admission.
2. Complete an interview with the PHT program director or a PHT faculty member prior to enrollment.
3. Completion of program entrance requirements.
4. Attending high school, or possess a GED or high school diploma.
5. Demonstrate keyboarding skills of 25 WPM or higher.
6. No previous conviction for a drug-related crime.
7. Submission of a résumé.
8. Complete criminal background check at student's expense.
9. Pass a 10-panel drug screen at student's expense.
10. Completion of a PHT health summary with documented immunization records prior to clinical rotations.

REQUIREMENTS

Assessment testing is required of all students. Students who are reading at the college level, and place into CCR 092 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Required Courses

PHT 111	Orientation to Pharmacy	3
PHT 112	Pharmacy Law	2
PHT 113	Pharmacy Calculations	1
PHT 114	Computer Skills for Pharmacy Technicians	1
PHT 115	Pharmacology I	3
PHT 116	Institutional Pharmacy	3
PHT 117	Communication for Pharmacy Technicians	1
PHT 118	Pharmacology II	3
PHT 119	Community Pharmacy	3
PHT 120	Medical Insurance Procedures	1
PHT 170	Pharmacy Clinical: Institutional	4
PHT 171	Pharmacy Clinical: Community	4

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 29

Phlebotomy

PHLEBOTOMY - CERTIFICATE

Field Code: F_CER_PHLB

Campus: Larimer Campus, Loveland

This certificate is designed to provide the student with entry-level skills required for employment as a phlebotomist. HPR 112 and HPR 113 are corequisites. HPR 113 is the clinical portion, and the student will complete 100 (112 in the fall) hours of clinicals in a 2-1/2-week block. A background check is required for HPR 113. A grade of "C" or above is required for all certificate courses. Successful completion of HPR 112 and HPR 113 will qualify the student to sit for a national certifying exam. Students are required to have immunizations to meet OSHA requirements, including, but not limited to, 2 MMR, seasonal flu shot, and current negative TB test. Contact individual campus for immunization requirements. Also a specific Background Check and 10-panel Drug Screen through Certified Background must be passed prior to the clinical.

REQUIREMENTS

Required Courses

HPR 112	Phlebotomy	4
HPR 113	Advanced Phlebotomy	4

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 8

Precision Machining Technology

This program provides entry-level as well as upgrading skills for students seeking a career in machining technology.

This program is comprised of four certificate options. Certificates are earned sequentially after the completion of each semester, beginning with the Manual Machining certificate (p. 124) and followed by the CAD/CAM (p. 124) and Quality Control (p. 124) certificates. Upon completion of all three semesters, students are awarded a Precision Machining Technology certificate (p. 124).

Assessment testing is required of all students. Students who are reading at the college level, and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

Note: Completion of MAC 100 Machine Shop Safety is required for all certificates, and must be completed before all lab use. MAT 108 or equivalent competency is required for all MAC courses and may be taken concurrently.

Precision Machining Technology - Certificates

PRECISION MACHINING TECHNOLOGY

Field Code: F_CER_PNMT

Campus: Boulder County Campus

REQUIREMENTS

Required Courses

MAC 100	Machine Shop Safety	1
MAC 101	Introduction to Machine Shop	3
MAC 102	Print Reading for Machinists	3
MAC 110	Introduction to Engine Lathe	3
MAC 120	Introduction to Milling Machine	3
MAC 201	Intro to CNC Turning Operations	3
MAC 205	Intro to CNC Milling Operations	3
MAC 240	CAD/CAM 2D	3
MAC 245	CADCAM 3D	3
MTE 130	Metrology	3
EGT 205	Geometric Dimension & Tolerance	3

Subtotal: 31

Required General Education Courses

MAT 108	Technical Mathematics	4
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Subtotal: 4

Total Credit Hours: 35

MANUAL MACHINING

Field Code: F_CER_MNMC

Campus: Boulder County Campus

REQUIREMENTS

Required Courses

MAC 100	Machine Shop Safety	1
MAC 101	Introduction to Machine Shop	3
MAC 102	Print Reading for Machinists	3
MAC 110	Introduction to Engine Lathe	3
MAC 120	Introduction to Milling Machine	3

Subtotal: 13

Required General Education Courses

MAT 108	Technical Mathematics	4
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Subtotal: 4

Total Credit Hours: 17

CAD/CAM

Field Code: F_CER_CDCM

Campus: Boulder County Campus

REQUIREMENTS

Required Courses

MAC 201	Intro to CNC Turning Operations	3
MAC 205	Intro to CNC Milling Operations	3
MAC 240	CAD/CAM 2D	3
MAC 245	CADCAM 3D	3

Total Credit Hours: 12

QUALITY CONTROL

Field Code: F_CER_QUCO

Campus: Boulder County Campus

REQUIREMENTS

Required Courses

MTE 130	Metrology	3
EGT 205	Geometric Dimension & Tolerance	3

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 6

Teacher Education

(See *Elementary Education or Early Childhood Education for Transfer* (p. 87))

Teaching English as a Second Language (TESL)

This certificate prepares students for entry-level employment as tutors, paraprofessionals, or teachers of English to adults and school-age children in numerous educational settings. In some cases, a university degree may be required for English as a Second Language instructor.

Program Admission Requirements:

1. Complete and submit applications for admission to the Teaching English as a Second Language (TESL) program and to FRCC at www.frontrange.edu/tesl.
2. Demonstrate proficiency in English by placing into ENG 121 or above. International students seeking admission to the program are required to have a minimum score of 475 on the paper/pencil TOEFL test, a score of 153 on the computer-based examination, or an "equated" score of 75 on the Michigan Test of English Language proficiency.
3. Apply to FRCC for admission upon acceptance into the program.

Assessment testing is required for all students. Students who place into ENG 121 or above and MAT 050 or above may begin this program of study.

Teaching English as a Second Language - Certificates

TEACHING ENGLISH AS A SECOND LANGUAGE/ABROAD

Field Code: F_CER_TESA

Campus: Boulder County Campus

REQUIREMENTS

Required Courses

TEL 100	TESL (Teaching English as a Second Language) English Study	3
TEL 102	Procedures and Techniques for the English as a Second Language Classroom	3
TEL 103	Career Strategies for the TESL Workplace	1
TEL 188	TESL Teaching Practicum	2
TEL 225	Second Language Acquisition	3
EDU 134	Teaching English as a Second Language to Adults	3
EDU 289	Capstone	1

Total Credit Hours: 16

TEACHING ENGLISH AS A SECOND LANGUAGE/K-12

Field Code: F_CER_TESK

Campus: Boulder County Campus

REQUIREMENTS

Required Courses

TEL 100	TESL (Teaching English as a Second Language) English Study	3
TEL 102	Procedures and Techniques for the English as a Second Language Classroom	3
TEL 103	Career Strategies for the TESL Workplace	1
TEL 188	TESL Teaching Practicum	2
TEL 225	Second Language Acquisition	3
TEL 245	ESL in the Content Areas	3
EDU 289	Capstone	1

Gainful Employment Disclosure Information

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 16

Veterinary Technician

VETERINARY TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_VET2

Campus: Larimer Campus

This program offers two educational options: a two-semester Veterinary Technician Assistant certificate (a separate listing follows) and a two-year Veterinary Technician Associate of Applied Science Degree.

The Veterinary Technician AAS degree program provides training in veterinary health and the handling of a variety of domestic and exotic animals, as well as laboratory animals encountered in a veterinary practice or biomedical research setting. While veterinary technicians serve as paraprofessional members of the veterinary medical team, veterinary technicians do not diagnose animal illnesses, prescribe treatment, or perform surgery.

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin these program options. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

The program's curriculum includes such topics as anatomy and physiology, radiology, parasitology, medical and surgical nursing,

anesthesia, pharmacology, and other related scientific areas of veterinary health or related skills areas. This curriculum is not intended to provide admission to a college of veterinary medicine.

A critical component of the program is student participation in clinical internships. Between the second and third semesters, a 135-hour private practice internship is required. In the final semester, students participate in clinical rotations at the Colorado State University Veterinary Teaching Hospital. This training includes such areas as critical care, large animal medicine and surgery, small animal care, and other related areas.

Admission Requirements:

To enter the program, students must meet the following admission requirements:

1. Completion of a high school diploma or GED.
2. Achievement of indicated assessment scores and completion of preparatory coursework.
3. Students must receive a grade of "C" or above and a cumulative GPA of 2.5 or higher on prerequisite courses listed below:

Completion of ENG 131 Technical Writing I or ENG 121 English Composition I

Completion of BIO 111 General College Biology (no more than seven years old)

Completion of HPR 178 Medical Terminology

Completion of MAT 107 Career Math or MAT 103 Math for Clinical Calculations or MAT 121 College Algebra

4. Completion of a Veterinary Technology Intent to Enroll application form available at the Larimer Campus or online at www.frontrange.edu.

Admission to the program is limited to the first 24 students who have submitted the appropriate admission materials. It is strongly recommended that students complete the required general education courses prior to beginning the program. Students must be admitted to the VET program to enroll in any VET prefix courses. Certified Veterinary Technicians may enroll in VET 242 and VET 109

REQUIREMENTS

All courses must be completed with a grade of "C" or above prior to graduation.

Required Courses

VET 102	Veterinary Medical Terminology	1
VET 106	Exotic Animal Handling	2
VET 108	Introduction to Laboratory Procedures	3
VET 115	Surgical Nursing	2
VET 116	Humane Treatment and Handling of Animals	3
VET 120	Office Procedures and Relations	2
VET 134	Diagnostic Imaging	2
VET 180	Internship: Private Practice	3
VET 205	Veterinary Anatomy and Physiology I	4

VET 206	Veterinary Anatomy and Physiology II	4
VET 224	Pharmacology for Veterinary Technicians	3
VET 225	Anesthesiology	3
VET 227	Animal Nutrition	2
VET 240	Veterinary Medicine and Surgery	4
VET 241	Clinical Laboratory Procedures	4
VET 243	Veterinary Diagnostic Microbiology	3
VET 250	Clinical Competency Evaluation	1
VET 280	Internship	11

Subtotal: 57

Required General Education Courses

BIO 111	General College Biology I with Lab Arts and Humanities or Social and Behavioral Sciences Elective	5 3
COM 125	Interpersonal Communication or	3
COM 115	Public Speaking	3
ENG 131	Technical Writing I or	3
ENG 121	English Composition I	3

Choose one of the following courses

MAT 107	Career Mathematics	3
MAT 103	Math for Clinical Calculations	3
MAT 121	College Algebra	4

Subtotal: 17

MAT 107 and ENG 131: For students who are planning to continue in a four-year, science-based program, these courses do not fulfill degree requirements. The following courses are required: ENG 121 and MAT 121.

Arts & Humanities or Social & Behavioral Sciences Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Elective Courses (Optional)

VET 109	Applied Companion Animal Behavior	3
VET 181	Internship: Laboratory Animal Technology	2
VET 242	Veterinary Critical Care	2

Gainful Employment Disclosure Information

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Total Credit Hours: 74

BASIC LABORATORY ANIMAL CARE - CERTIFICATE

Field Code: F_CER_BLAC

Campus: Larimer Campus

This certificate program is designed to meet the demands of the biomedical research community for qualified personnel in the care and management of laboratory animals. Technicians certified in Laboratory Animal Technology are central to the integrity of biomedical research, assuring a high standard of humane care for research animals. For more information, contact the office of Mardie Altman at 970-204-8415.

REQUIREMENTS

Required Courses

ALT 126	Introduction to Lab Animal Science	3
ALT 280	Lab Animal Internship	1-12
VET 102	Veterinary Medical Terminology	1
VET 106	Exotic Animal Handling	2
VET 116	Humane Treatment and Handling of Animals	3

Total Credit Hours: 12

VETERINARY TECHNICIAN ASSISTANT - CERTIFICATE

Field Code: F_CER_VTA

Campus: Larimer Campus

The Veterinary Technician Assistant certificate program provides training in veterinary health and handling of a variety of domestic and exotic species, with the focus on tasks for assisting the Veterinary Technician and Veterinarians. Veterinary Technician Assistants do not diagnose animal illnesses, prescribe treatment, or perform surgery. Completion of all course work is required before the student is eligible for a 2-credit, 72-hour private-practice internship. This program provides an introduction to the field of veterinary medicine, but is not intended to provide admission to a college of veterinary medicine.

Admission Requirements:

To enter the program, students must meet the following admission requirements:

1. Completion of a high school diploma or GED
2. Achievement of indicated assessment scores or completion of preparatory course work.
3. Completion or concurrent enrollment of BIO 105 or BIO 111 with a grade of "C" or above (no more than seven years old)
4. Completion of or concurrent enrollment in HPR 178 Medical Terminology (1 credit), with a grade of "C" or above.
5. Prospective students must attend an information meeting the first Thursday of every month in MA131 at the Larimer Campus from 4:00 to 5:00 pm.
6. Completion of a Veterinary Technician Assistant intent to enroll application form available at the Larimer Campus.

Admission to the program is limited to the first 12 students who have submitted the appropriate admission materials. Students must be admitted to the Veterinary Technician Assistant program in order to take the curriculum courses as shown below.

REQUIREMENTS

All courses must be completed with a grade of "C" or above prior to graduation.

Required Courses

VET 102	Veterinary Medical Terminology	1
VET 103	Veterinary Assistant Restraint and Handling	2
VET 113	Veterinary Assistant Surgical Nursing and Care	3
VET 114	Veterinary Assistant Laboratory and Clinical Procedures	3
VET 120	Office Procedures and Relations	2
VET 183	Internship	2
		Subtotal: 13

Required General Education Courses

BIO 105	Science of Biology with Lab or	4
BIO 111	General College Biology I with Lab	5
		Subtotal: 4

Total Credit Hours: 17

Welding Technology

WELDING TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE DEGREE

Field Code: F_AAS_WTE

Campus: Larimer Campus, Westminster Campus

This program provides entry-level as well as upgrading skills in welding technology.

This program is offered on an open-entry basis: students may complete some of the courses, enter the workforce, then return at any time either to complete the program or to upgrade specific skills.

REQUIREMENTS

All courses applied to the degree or certificate must be completed with a grade of "C" or above.

Assessment testing is required for all students. Students who are reading at college-level and place into CCR 093 or above and MAT 050 or above may begin this program of study. Students scoring below this level should consult with a faculty member before registering for courses in this program of study.

New welding students may contact the welding program for advising in Room RP120 at Larimer, or call 970-204-8621.

Required Courses

MTE 110	Manufacturing Communication and Teamwork	3
WEL 100	Safety for Welders or	1
MTE 105	Safety for Manufacturing Environments	1
WEL 101	Allied Cutting Processes	4
WEL 103	Basic Shielded Metal Arc I	4
WEL 104	Basic Shielded Metal Arc II	4

WEL 106	Blueprint Reading for Welders and Fitters	4
WEL 110	Advanced Shielded Metal Arc I	4
WEL 124	Introduction to Gas Tungsten Arc Welding	4
WEL 125	Introduction to Gas Metal Arc Welding	4
WEL 224	Advanced Gas Tungsten Arc Welding	4
WEL 225	Advanced Gas Metal Arc Welding	4
WEL 250	Layout and Fabrication	4
WEL 289	Capstone	1
	or an elective in: ART, ASE, CAD, ENT, HVAC, OR WEL	1

Subtotal: 45

WEL 101, WEL 106, WEL 250: These courses can be substituted with the Pipe Welding Code Certificate courses WEL 230 Pipe Welding I, WEL 231 Pipe Welding II, or WEL 240 Pipe Welding Certification.

Required General Education Courses

MAT 107	Career Mathematics or higher	3
PHY 105	Conceptual Physics with Lab	4
	Social and Behavioral Sciences or Arts and Humanities Elective	3
	General Studies Elective	3

General Studies and Arts and Humanities Electives: Electives must be selected from the Approved General Education Electives List for the AAS degree (p. 56).

Choose one of the following courses

ENG 121	English Composition I	3
ENG 122	English Composition II	3
ENG 131	Technical Writing I	3

Subtotal: 16**Gainful Employment Disclosure Information**

The U.S. Department of Education requires colleges to disclose a variety of information for any financial-aid-eligible program that "prepares students for gainful employment in a recognized occupation." The information provided here is the best available to us but represents one year's data only. We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices. For more Gainful Employment information, please go to the FRCC website: www.frontrange.edu/GainfulEmployment.

Total Credit Hours: 61**Welding Technology - Certificates****COMPREHENSIVE WELDING**

Field Code: F_CER_WTEC

Campus: Larimer Campus

REQUIREMENTS**Required Courses**

WEL 100	Safety for Welders or	1
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MTE 105	Safety for Manufacturing Environments	1
WEL 101	Allied Cutting Processes	4
WEL 103	Basic Shielded Metal Arc I	4
WEL 104	Basic Shielded Metal Arc II	4
WEL 106	Blueprint Reading for Welders and Fitters	4
WEL 110	Advanced Shielded Metal Arc I	4
WEL 124	Introduction to Gas Tungsten Arc Welding	4
WEL 125	Introduction to Gas Metal Arc Welding	4
WEL 224	Advanced Gas Tungsten Arc Welding	4
WEL 225	Advanced Gas Metal Arc Welding	4
WEL 250	Layout and Fabrication	4

WEL 101, WEL 106, and WEL 250: These courses can be substituted with the Pipe Welding Code Certificate courses WEL 230 Pipe Welding I, WEL 231 Pipe Welding II, or WEL 240 Pipe Welding Certification.

Total Credit Hours: 41**CREATIVE METALWORKING**

Field Code: F_CER_WEL1

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

ART 110	Art Appreciation	3
ART 121	Drawing I	3
CAD 101	Computer-Aided Drafting I	3
CAD 102	Computer-Aided Drafting II	3
WEL 100	Safety for Welders or	1
MTE 105	Safety for Manufacturing Environments	1
WEL 101	Allied Cutting Processes	4
WEL 124	Introduction to Gas Tungsten Arc Welding	4
WEL 289	Capstone	1

WEL 101: This course can be substituted with the Pipe Welding Code Certificate courses WEL 230 Pipe Welding I, WEL 231 Pipe Welding II, or WEL 240 Pipe Welding Certification.

Choose one of the following:

ART 132	Visual Concepts 3-D Design or	3
ART 154	Figure Painting I	3

Choose one of the following1:

CAD 202	Computer-Aided Drafting/3D	3
CAD 240	Inventor I/Autodesk	3
CAD 255	Solidworks/Mechanical	3

Total Credit Hours: 28**GAS METAL ARC WELDING (MIG)**

Field Code: F_CER_WTEM

Campus: Larimer Campus

REQUIREMENTS**Required Courses**

WEL 100	Safety for Welders or	1
MTE 105	Safety for Manufacturing Environments	1
WEL 125	Introduction to Gas Metal Arc Welding	4
WEL 225	Advanced Gas Metal Arc Welding	4

Total Credit Hours: 9**GAS TUNGSTEN ARC WELDING (TIG)**

Field Code: F_CER_WTET

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

WEL 100	Safety for Welders or	1
MTE 105	Safety for Manufacturing Environments	1
WEL 124	Introduction to Gas Tungsten Arc Welding	4
WEL 224	Advanced Gas Tungsten Arc Welding	4

Total Credit Hours: 9**OXYACETYLENE WELDING**

Field Code: F_CER_WTEO

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

WEL 100	Safety for Welders or	1
MTE 105	Safety for Manufacturing Environments	1
WEL 101	Allied Cutting Processes	4

WEL 101: This course can be substituted with the Pipe Welding Code Certificate courses WEL 230 Pipe Welding I, WEL 231 Pipe Welding II, or WEL 240 Pipe Welding Certification.

Total Credit Hours: 5**PIPE CODE WELDING**

Field Code: F_CER_WTEP

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

WEL 100	Safety for Welders or	1
MTE 105	Safety for Manufacturing Environments	1
WEL 230	Pipe Welding I	4
WEL 231	Pipe Welding II	4

WEL 240	Pipe Welding Certification	4
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Total Credit Hours: 13**SHIELDED METAL ARC WELDING**

Field Code: F_CER_WTES

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

WEL 100	Safety for Welders or	1
MTE 105	Safety for Manufacturing Environments	1
WEL 103	Basic Shielded Metal Arc I	4
WEL 104	Basic Shielded Metal Arc II	4
WEL 110	Advanced Shielded Metal Arc I	4

Total Credit Hours: 13**WELDING FUNDAMENTALS**

Field Code: F_CER_WTEF

Campus: Larimer Campus, Westminster Campus

REQUIREMENTS**Required Courses**

WEL 100	Safety for Welders or	1
MTE 105	Safety for Manufacturing Environments	1

Select a minimum of 8 credits from the following:

WEL 101	Allied Cutting Processes	4
WEL 103	Basic Shielded Metal Arc I	4
WEL 104	Basic Shielded Metal Arc II	4
WEL 124	Introduction to Gas Tungsten Arc Welding	4
WEL 125	Introduction to Gas Metal Arc Welding	4

WEL 101: This course can be substituted with the Pipe Welding Code Certificate courses WEL 230 Pipe Welding I, WEL 231 Pipe Welding II, or WEL 240 Pipe Welding Certification.

Total Credit Hours: 9

COURSES

This section describes credit courses offered by FRCC. Courses are grouped by subject areas and programs. The programs and areas are in alphabetical order.

- Each course title begins with a three-letter subject area and the course number (e.g., ENG 121). The number in parentheses to the right of the entry specifies credit hours earned for the course. The course description briefly explains course content.
- Some courses have prerequisites or corequisites. A prerequisite must be taken before entering a course. A corequisite must be taken prior to, or concurrently with, a course. In individual cases, prerequisites or corequisites may be waived upon approval of the instructor, chair and instructional dean.
- Contact Hours indicate the total number of class hours during the term.
- Some courses require a special laboratory fee.
- Only courses numbered 100 or above (except for ENG 110, MAT 099, and REA 112) may be used to fulfill certificate or degree requirements.

Note: ENG 110 and MAT 099 may meet the general education mathematics requirement for designated A.A.S. Degrees only.

For a list of suggested courses in specific programs of study, refer to the appropriate program in the Instructional Programs section.

For additions, deletions, and other changes from last year's catalog, see Course Changes.

State Guaranteed General Education Transfer Courses

Courses with an * have been identified by the Colorado Department of Higher Education as being the State Guaranteed General Education courses.

AH - Arts and Humanities

In addition, guaranteed transfer courses are identified by the designations in the chart below.

AH1 - Arts and Expression

AH2 - Literature and Humanities

AH3 - Ways of Thinking

AH4 - Foreign Languages

CO - Communication

CO1 - Introductory Writing Course

CO2 - Intermediate Writing Course

HI - History

No subcategories

MA - Mathematics

No subcategories

SC - Natural and Physical Sciences

SC1 - Science with Laboratory

SC2 - Science without Laboratory

SS - Social and Behavioral Sciences

SS1 - Economic and Political Systems

SS2 - Geography

SS3 - Human Behavior, Cultural, or Social Frameworks

Additional Specialized Courses

The following specialized courses are offered within each program area. For further information contact a Program Advisor. (Credit hours are variable.)

XXX 185 - Independent Study ()

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. Students are reminded that no more than six (6) credit hours of independent study may be applied to any associate degree program.

Contact Hours: 30 Contact Hours PER CREDIT.

XXX 187 - Cooperative Education ()

Provides students with the opportunity to supplement coursework with paid practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

Contact Hours: 45 Contact Hours PER CREDIT.

XXX 188 - Practicum ()

Provides the learner the opportunity for the practical application of classroom theory within a given program of study.

Contact Hours: 30 Contact Hours PER CREDIT.

XXX 170-174 - Clinical ()

Offers the clinical practicum to apply the related theory.

Contact Hours: 22.5-45 Contact Hours PER CREDIT.

XXX 175-177 - Special Topics ()

Provides students with a means to pursue in-depth exploration of special topics of interest.

Contact Hours: Contact Hours VARY.

XXX 178-179 - Seminar/Workshop ()

Provides students with select areas of study within a program of study.

Contact Hours: 15 Contact Hours PER CREDIT.

XXX 180-184 - Internship ()

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 business location and with the direct guidance of the instructor/ coordinator.

Contact Hours: 45 Contact Hours PER CREDIT.

XXX 285 - Independent Study ()

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. Students are reminded that no more than six (6) credit hours of independent study may be applied to any associate degree program.

Contact Hours: 30 Contact Hours PER CREDIT.

XXX 287 - Cooperative Education ()

Provides students with the opportunity to supplement coursework with paid practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

Contact Hours: 45 Contact Hours PER CREDIT.

XXX 288 - Practicum ()

Provides the learner the opportunity for the practical application of classroom theory within a given program of study.

Contact Hours: 30 Contact Hours PER CREDIT.

XXX 289 - Capstone ()

Focuses on demonstrated culmination of learning within a given program of study.

Contact Hours: 15-45 Contact Hours PER CREDIT.

XXX 270-274 - Clinical ()

Offers the clinical practicum to apply the related theory.

Contact Hours: 22.5-45 Contact Hours PER CREDIT.

XXX 275-277 - Special Topics ()

Provides students with a means to pursue in-depth exploration of special topics of interest.

Contact Hours: Contact Hours VARY.

XXX 278-279 - Seminar/Workshop ()

Provides students with select areas of study within a program of study.

Contact Hours: 15 Contact Hours PER CREDIT.

XXX 280-284 - Internship ()

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 business location and with the direct guidance of the instructor/ coordinator.

Contact Hours: 45 Contact Hours PER CREDIT.

AAA - Advancement of Academic Achievement**AAA 050 - Academic Achievement Strategies (2)**

Emphasizes basic study skills in order to bolster their chances of successfully completing the current semester.

Contact Hours: 30 Contact Hours.

AAA 090 - Academic Achievement Strategies (3)

Develops personalized approaches to learning and succeeding for easier transition into college. Topics include goal-setting, time management, textbook reading strategies, note-taking, test-taking, listening techniques, concentration and memory devices, and critical thinking for student success.

Contact Hours: 45 Contact Hours.

AAA 095 - Math Helps (1)

Provides the opportunity to supplement current math course with mathematical instruction individually designed to 'fill in the holes' of missing mathematical concepts. In addition, the course serves as a solid review of mathematical concepts in preparation for college level math courses. Students will study the content area needed for that student, as indicated by a diagnostic assessment. Students with Accuplacer scores AR 24-39, who are advised into MAT 050, are required to co-enroll in this course.

Contact Hours: 45 Contact Hours.

AAA 101 - College : Student Experience (1)

Introduces students to college culture and prepares them for the challenges they will face in higher education. Through a series of interactive seminars, students discover learning in a multicultural environment and how to use college and community resources to attain education and career goals.

Contact Hours: 15 Contact Hours.

AAA 109 - Advanced Academic Achievement (3)

Examines theories and practices associated with successful learning to enhance college success. Areas of study include education and career planning, effective communication, personal management, critical and creative thinking, development of community and awareness of diversity, leadership, and techniques for successful academic performance. Recommended for new and returning students.

Contact Hours: 45 Contact Hours.

ACC - Accounting**ACC 101 - Fundamentals of Accounting (3)**

Presents the basic elements and concepts of accounting with emphasis on the procedures used for maintaining journals, ledgers, and other related records, and for the completion of end-of-period reports for small service and merchandising businesses.

Prerequisite: None

Contact Hours: 45 Contact Hours.

ACC 115 - Payroll Accounting (3)

Studies federal and state employment laws and their effects on personnel and payroll records. The course is non-technical and is intended to give students a practical working knowledge of the current payroll laws and actual experience in applying regulations. Students are exposed to computerized payroll procedures.

Prerequisite: ACC 101 or ACC 121

Contact Hours: 45 Contact Hours.

ACC 121 - Accounting Principles I (4)

Introduces the study of accounting principles for understanding of the theory and logic that underlie procedures and practices. Major topics include the accounting cycle for service and merchandising companies, special journals and subsidiary ledgers, internal control principles and practices, notes and interest, inventory systems and costing, plant assets and intangible asset accounting, and depreciation methods and practices.

Contact Hours: 60 Contact Hours.

Recommended Preparation for AAS Accounting Students: ACC 101

ACC 122 - Accounting Principles II (4)

Continues the study of accounting principles as they apply to partnerships and corporations. Major topics include stocks and bonds, investments, cash flow statements, financial analysis, budgeting, and cost and managerial accounting.

Prerequisite: ACC 121

Contact Hours: 60 Contact Hours.

ACC 131 - Income Tax (3)

Studies basic concepts of federal income taxation; including gross income, deductions, accounting periods and methods, and property transactions, with emphasis on taxation of individuals and sole proprietorships.

Prerequisite: ACC 121

Contact Hours: 45 Contact Hours.

ACC 132 - Tax Help Colorado (2)

This course prepares the students for preparation of federal and state income tax returns for individuals. Emphasis is placed on form preparation with the use of tax software.

Contact Hours: 30 Contact Hours.

ACC 133 - Tax Help Colorado Practicum (1)

This course allows students to prepare actual federal and state income tax returns for individuals in the real time environment.

Contact Hours: 30 Contact Hours.

Recommended Preparation: ACC 122 (p. 132) and CIS 155 (p. 151)

ACC 135 - Spreadsheet Applications for Accounting (3)

Introduces spreadsheets as an accounting tool. Using an accounting perspective, the student applies fundamental spreadsheet concepts. The spreadsheet is used as a problem solving and decision making tool.

Prerequisite: ACC 122 and CIS 155.

Contact Hours: 45 Contact Hours.

ACC 138 - Payroll and Sales Tax (3)

Acquaints students with laws pertaining to payroll and sales taxes including record keeping rules. Students prepare various federal, state and local forms for reporting payroll taxes and sales taxes. A computerized payroll simulation is included in the course.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ACC 101 (p. 131) or ACC 121 (p. 131)

ACC 211 - Intermediate Accounting I (4)

This course focuses on comprehensive analysis of generally accepted accounting principles (GAAP), accounting theory, concepts, and financial reporting principles for public corporations. It is the first of a two-course sequence in financial accounting and is designed primarily for accounting and finance majors. This course also focuses on the preparation and analysis of business information relevant and useful to external users of financial statements. Explores the theories, principles and

practices surveyed in Accounting Principles and critically examines "real-world" financial analysis and reporting issues.

Prerequisite: ACC 122

Contact Hours: 60 Contact Hours.

ACC 212 - Intermediate Accounting II (4)

This course focuses on the theoretical and practical aspects of accounting for long-term liabilities, stockholders' equity, investments, pensions and leases. This includes income tax allocation, financial statement analysis, cash flow statements and accounting method changes.

Prerequisite: ACC 211

Contact Hours: 60 Contact Hours.

ACC 216 - Govt & Not-for-profit Accounting (3)

Addresses concepts of budgetary control as a matter of law and public administration theory. Accounting principles and procedures necessary to implement budgetary controls for governmental units and other not-for-profit institutions and organizations are presented.

Contact Hours: 45 Contact Hours.

ACC 226 - Cost Accounting (3)

Studies cost accumulation methods and reports. Focuses on the concepts and procedures of job order, process, standard, and direct cost systems, budgeting, planning, and control of costs.

Prerequisite: ACC 122

Contact Hours: 45 Contact Hours.

ACC 231 - Business Taxation (3)

Introduces student to taxation of business entities and transactions. Topics include taxation of property transactions, various tax issues that apply to different tax entities, tax administration and practice, and the taxation effects of formation, operation, and dissolution of corporations, partnerships, S corporations, trusts and estates.

Prerequisite: ACC 121 & ACC 131

Contact Hours: 45 Contact Hours.

ACC 245 - Computerized Accounting with a Professional Package (3)

Integrates accounting principles and practices with a computerized accounting package such as Peachtree, DacEasy, or other professional package. Emphasizes computerized functions of the general ledger and integrated accounts payable, accounts receivable, invoicing and payroll systems.

Prerequisite: ACC 101 or ACC 121

Contact Hours: 45 Contact Hours.

ACC 255 - Vita - Volunteer Income Tax Assistance (3)

This course prepares students in preparation of federal and state income tax returns in order to participate in the Volunteer Income Tax Assistance program offered to low income and elderly persons in their communities.

Prerequisite: ACC 131

Contact Hours: 45 Contact Hours.

Permission from instructor is recommended

ACC 265 - Enrolled Agent Exam Review Course (3)

Reviews concepts learned in study of accounting, individual and business income tax and ethical decision making as they relate to passing the IRS Enrolled Agent Exam.

Prerequisite: ACC 231

Contact Hours: 45 Contact Hours.

ACC 280 - Internship (1-12)

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 business locations and with the direct guidance of the instructor.

Prerequisite: To be determined by the instructor

Contact Hours: 45 Contact Hours PER CREDIT.

ACC 285 - Independent Study (1)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. Students are reminded that no more than six (6) credit hours of independent study may be applied to any associate degree program.

ACC 289 - Capstone: Company Financial Overview (1)

Provides pending accounting graduates with the opportunity to evaluate their analysis skills, both during the application process and afterwards when considering the viability of the company. Using the knowledge acquired from their academic studies, the student prepares the computerized records and evaluates the financial standing for one company. Financial analysis using spreadsheet capabilities and written report skills are included. The student works independently of a traditional classroom setting.

Prerequisite: ACC 122 and ACC 135 and ACC 245

Contact Hours: 15 Contact Hours.

Semester of graduation

ACC 294 - Service Learning (1-12)

Allows the student to provide a service to the community utilizing knowledge and skills acquired from a course in which the student is currently enrolled or has previously taken at the student's respective college.

Contact Hours: 45 Contact Hours.

See the list of Specialized Accounting Courses on the first page of this Course Offerings section.

AEC - Architectural Engineering and Construction Technology**AEC 101 - Basic Architectural Drafting (4)**

Introduces the student to basic architectural drafting techniques. Topics explored in lecture and through project work include: use of instruments, geometric construction, multiview, oblique and isometric projections, and basic construction drawings.

Contact Hours: 90 Contact Hours.

AEC 102 - Residential Construction Drawing (4)

Covers an investigation of light frame construction techniques and the production of residential construction drawings. The course covers residential construction materials, components

and systems related to wood frame structures. Students produce a professional set of construction drawings of a residential structure.

Prerequisite: AEC 101 and CAD 101. Recommended Preparation: AEC 121.

Contact Hours: 90 Contact Hours.

AEC 121 - Construction Materials and Systems (3)

Examines building materials and construction techniques. Topics include a study of soils, concrete, brick, masonry, steel, timber, and plastics and a study of types of building structural systems and components. Principles of interpreting light commercial construction drawings (blueprints) for structural and trade information are also introduced.

Contact Hours: 67.5 Contact Hours.

AEC 122 - Construction Practices and Documents (2)

Investigates construction practices, specifications, contracts and other legal documents used in the building construction industry. The roles and responsibilities of design and construction team participants are also explored.

Prerequisite: Prerequisite or Corequisite: AEC 121.

Contact Hours: 45 Contact Hours.

AEC 123 - Commercial Construction Drawings (4)

Examines the drawing of architectural plans, elevations, sections, details, and schedules. Students produce a portfolio of construction drawings of a multi-story skeleton structure.

Prerequisite: AEC 102 or CAD 224 Recommended preparation CAD 222 Navisworks/AutoDesk

Contact Hours: 90 Contact Hours.

AEC 200 - Building Design Development (3)

Acquaints the student with the process of building design development. Factors, which influence and dictate building design, are explored in lecture. Emphasis is placed upon interpretation and application of the building code. Students apply code and program requirements in generating and revising design development drawings of single and mixed occupancy buildings.

Prerequisite: AEC 102

Contact Hours: 67.5 Contact Hours.

AEC 205 - Applied Statics and Strengths of Materials (3)

Provides an algebra-based investigation of concepts in statics and strengths of materials. Topics include a study of fundamental mechanical properties of materials, single planar forces, properties of sections, and two-dimensional free body, shear and bending moment diagrams.

Prerequisite: MAT 121 and AEC 121.

Contact Hours: 67.5 Contact Hours.

AEC 208 - Building Environmental Systems I (3)

Introduces concepts in operation and design of mechanical and sustainable (green) building systems that provide a healthy, comfortable and productive indoor air environment. Major topics covered include thermal comfort, heat and moisture flow in buildings, indoor air quality, and mechanical (HVAC and solar thermal) systems for climate in buildings.

Prerequisite: AEC 121 and AEC 102.

Contact Hours: 67.5 Contact Hours.

AEC 215 - Elementary Site Planning (3)

Acquaints the student with basic surveying principles, building site analysis and associated drawings. Emphasizes systems of land survey, topographical analysis, zoning and site requirements, and other factors that influence building site development. Students complete problems in building construction surveying.

Prerequisite: AEC 121 Corequisite: MAT 122

Contact Hours: 67.5 Contact Hours.

AEC 216 - Construction Estimating (3)

Studies fundamental structural elements and building structures. Building forces, transfer of forces, and structural members and systems are investigated through computation and project work. Fundamental engineering theory related to steel, wood, reinforced concrete and masonry are introduced.

Prerequisite: AEC 101, AEC 121 and CIS 118

Contact Hours: 67.5 Contact Hours.

AEC 218 - Sustainable Building Systems (3)

Investigates the technologies and strategies related to sustainable (green) materials and systems for buildings. Topics include: energy and environmental consciousness/regulations; the high performance building envelope; alternative construction techniques (adobe, cob, rammed earth, straw bale); microclimate/site factors; sustainable green materials; and passive solar, active thermal solar, photovoltaic energy, wind energy conversion, on site water use/reuse and waste disposal systems.

Prerequisite: AEC 121

Contact Hours: 67.5 Contact Hours.

AEC 280 - Internship (3)

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 business location and with the direct guidance of the instructor/ coordinator.

AEC 285 - Independent Study (3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. Students are reminded that no more than six (6) credit hours of independent study may be applied to any associate degree program.

AEC 289 - Capstone (3)

Focuses on a demonstrated culmination of learning within a given program of study.

Prerequisite: AEC 121, AEC 122 and AEC 123.

Contact Hours: 68 Contact Hours.

AIR - Air Force ROTC

AIR 101 - Foundations of the U.S. Air Force I (1)

Introduces students to the U.S. Air Force and the U.S.A.F. officer profession. Uses instructor lectures, films and videos, and group activities to examine Air Force issues, officer qualities, and

military customs and courtesies. Examines the communication skills necessary for an Air Force officer.

Contact Hours: 15 Contact Hours.

AIR 102 - Foundations of the U.S. Air Force (1)

Continues the topics of AIR 101.

Contact Hours: 15 Contact Hours.

AIR 103 - Military Leadership Lab I (1)

Complements AIR 101 by providing cadets with leadership, management and followership experiences. Leadership Laboratory is for students who are members of AFROTC or are eligible to pursue a commission as determined by the Professor of Aerospace Studies. This course consists of physical fitness training and a hands-on practical leadership lab.

Contact Hours: 15 Contact Hours.

AIR 104 - Military Leadership Lab II (1)

Complements AIR 102 by providing cadets with continuing leadership, management and followership experiences. Leadership Laboratory is for students who are members of AFROTC or are eligible to pursue a commission as determined by the Professor of Aerospace Studies. This course consists of physical fitness training and a hands-on practical leadership lab and builds upon the outcomes in AIR 103.

Contact Hours: 15 Contact Hours.

AIR 201 - Evolution of USAF Air and Space Power I (1)

Includes airpower, the history of airpower and air doctrine from the World War II to present. The course also examines the role of airpower in the Berlin Airlift, Korean War, Mideast and Vietnam Conflict, as well as the evolution of airpower concepts and doctrine and the development of communicative skills.

Contact Hours: 15 Contact Hours.

AIR 202 - Evolution of USAF Air and Space Power II (1)

Continues the topics discussed in AIR 201.

Contact Hours: 15 Contact Hours.

AIR 203 - Military Leadership Lab III (1)

Complements AIR 201 by providing cadets with opportunities for higher level leadership, management and followership experiences. This course builds upon the competencies from AIR 103 and AIR 104. Leadership Laboratory is for students who are members of AFROTC or are eligible to pursue a commission as determined by the Professor of Aerospace Studies. This course consists of physical fitness training and a hands-on practical leadership lab.

Contact Hours: 15 Contact Hours.

AIR 204 - Military Leadership Lab IV (1)

Complements AIR 202 by providing cadets with opportunities for increasingly higher level leadership, management and followership experiences. Leadership Laboratory is for students who are members of AFROTC or are eligible to pursue a commission as determined by the Professor of Aerospace Studies. This course consists of physical fitness training and a hands-on practical leadership lab and continues to build upon the learning outcomes from AIR 203.

Contact Hours: 15 Contact Hours.

ALT - Animal Lab Technology

ALT 126 - Introduction to Lab Animal Science (3)

Provides students with an overview of the field of laboratory animal care in its many manifestations in biomedical and agricultural research and testing and teaching.

Prerequisite: BIO 111

Contact Hours: 45 Contact Hours.

ALT 280 - Lab Animal Internship (1-12)

Provides students a minimum of 135 hours of work in a biomedical research facility as coordinated by the program. Students work under the immediate supervision of experienced personnel at the institution and with the direct guidance of the instructor. Hours completed will help fulfill AALAS certification work requirements.

Prerequisite: Instructor Approval

Contact Hours: 45 Contact Hours PER CREDIT.

ANT - Anthropology

ANT 101 - Cultural Anthropology (3)

Studies human cultural patterns and learned behavior. Includes linguistics, social and political organization, religion, culture and personality, culture change, and applied anthropology.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

ANT 102 - Cultural Anthropology Lab (1)

Study the art and science of ethnographic research methods, analyze classic ethnographies, conduct field research projects, write model ethnographies and ethnologies, and address ethical debates and controversies.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 15 Contact Hours.

ANT 103 - Archaeology Laboratory (1)

Studies analytical methods in archaeological research including those employed both in the field and in the laboratory. Deals with practical exercises illustrating many of the theoretical principles of archaeology, including methods of archaeological survey, excavation, artifact analysis, collection strategies, mapping strategies, and field interpretation.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 15 Contact Hours.

ANT 104 - Physical Anthropology Laboratory (1)

Investigates the principles of physical/biological anthropology. Includes genetic and evolutionary processes, comparative skeletal anatomy, primate morphology and behavior, human evolution, modern human variation, and forensics through

laboratory and/or online practicum exercises and analytical discussions.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 15 Contact Hours.

ANT 106 - Ethnography of the Deaf Community (3)

Applies ethnographic methods and principles to deaf heritage and community. Focus is on adaptations deaf people use to interact with one another and the hearing world.

Contact Hours: 45 Contact Hours.

ANT 107 - Introduction to Archaeology (3)

Introduces the science of recovering the human prehistoric and historic past through excavation, analysis, and interpretation of material remains. Includes a survey of the archaeology of different areas of the Old and New Worlds. Also includes the works of selected archaeologists and discussions of major archaeological theories.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

ANT 108 - Archaeology of World Rock Art (3)

Introduces the archaeology of new and old world rock art dating from the historic past to over 30,000 years ago using a scientific perspective. Presents classification, recordation, dating, analysis, management and conservation, research ethics and protocols, and symbolic and ethnographic interpretation and addresses other formal approaches and established as well as emerging theory.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

ANT 111 - Biological Anthropology with Laboratory (4)

Focuses on the study of the human species and related organisms, and examines principles of genetics, evolution, anatomy, classification, and ecology, including a survey of human variation and adaptation, living primate biology and behavior, and primate and human fossil evolutionary history.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT:SC1).

Contact Hours: 75 Contact Hours.

ANT 126 - Colorado Archaeology (3)

Identifies and evaluates distinct prehistoric cultures present in the region now known as Colorado since about 10,000 years ago, using specific archaeological techniques and terminologies.

Contact Hours: 45 Contact Hours.

ANT 201 - Introduction to Forensic Anthropology (3)

Studies the basic principles of forensic anthropology, an applied field within the discipline of physical anthropology. Includes the

study of the human skeleton, practical application of physical anthropology and archaeology, and judicial procedure, as they relate to the identification of human remains within a medico-legal context.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

ANT 215 - Indians of North America (3)

Studies the Indians of North America from the origins of native peoples in the New World, through the development of geographic culture areas, to European contact and subsequent contemporary Native American issues.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

ANT 221 - Exploring Other Cultures I (3)

Provides an anthropological understanding of a selected culture. Areas of study include the culture's language, processes of enculturation, subsistence patterns and economics, kinship and descent, political organization, religion, art, history and its reactions to the forces of globalization.

Contact Hours: 45 Contact Hours.

ANT 225 - ANThropology of Religion (3)

Explores the culturally universal phenomenon of religion. Cross-cultural varieties of beliefs in the supernatural and the religious rituals people employ to interpret and control their worlds are examined.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Contact Hours: 45 Contact Hours.

ANT 250 - Medical Anthropology (3)

Studies the basic principles of medical anthropology, an applied field within the discipline of cultural anthropology. Includes the cross-cultural study of practices and beliefs regarding illness, health, death, prevention and therapy; and the interaction of the medical systems between Western and other cultures.

Prerequisite: ENG 121

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

ANT 263 - Anthropology of Folklore (3)

This course is a cross-cultural examination of oral traditions and verbal arts and how they reflect and preserve cultural values and worldviews. Various narratives (myths, legends and tales), dramas, poetry and other structural sayings are considered.

Contact Hours: 45 Contact Hours.

See the list of Specialized Anthropology Courses on the first page of this Course Offerings section.

ANT 280 - Southwest Field Experience (2)

Introduces the social, religious, economic, and cultural development of selected American Indian societies and Hispanic

settlements of the American Southwest. Major ruins, archaeological sites, museums, reservations, and/or pre-statehood communities are explored by field trip.

Contact Hours: 90 Contact Hours.

AQT - Aquaculture

AQT 102 - Fish Biology and Ichthyology (5)

Introduces the study of fish. Focuses on fish anatomy and physiology, reproduction and development, behavior and activities, nomenclature and taxonomy, and evolution and adaptations. Covers the basic anatomy of fish and their organ systems and includes the laboratory dissection. The course also includes a survey of the important families of fishes with emphasis on species of aqua cultural significance. Students use taxonomic keys to identify individual species and become familiar with life histories and evolutionary adaptations.

Contact Hours: 113 Contact Hours.

AQT 245 - Pond Management (4)

Study basic pond management of plants and animals to be able to design, install, and maintain a balanced pond ecosystem. Experience is gained in assessing and managing ponds through fieldwork and classroom instruction.

Contact Hours: 90 Contact Hours.

ARA - Arabic

ARA 101 - Conversational Arabic I (3)

Introduces beginning students to conversational Arabic and focuses on understanding and speaking Arabic. Covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

Contact Hours: 45 Contact Hours.

ARA 102 - Conversational Arabic II (3)

Continues the sequence for students who wish to understand and speak Arabic. Covers basic conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ARA 101 or equivalent.

ARA 111 - Arabic Language I (5)

Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the Arabic language.

Contact Hours: 75 Contact Hours.

ARA 112 - Arabic Language II (5)

Continues Arabic Language I in the development of functional proficiency in listening, speaking, reading and writing the Arabic language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

Contact Hours: 75 Contact Hours.

Recommended Preparation: ARA 111 or equivalent.

ARA 211 - Arabic Language III (3)

Continues Arabic I and II in the development of increased functional proficiency in listening, speaking, reading and writing the Arabic language. Note: The order of the topics and the

methodology will vary according to individual texts and instructors.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ARA 112 (p. 136) or equivalent. CCR 092 (p. 150), CCR 093 (p. 150), or CCR 094 (p. 150) or equivalent testing scores. These courses may be taken concurrently.

ARM - Army ROTC

ARM 111 - Adventures in Leadership I (2)

Introduces the fundamentals of leadership and the United States Army. Includes Army leadership doctrine, team-building concepts, time and stress management, and an introduction to cartography and land navigation, marksmanship, briefing techniques, and basic military tactics. Includes lecture and laboratory.

Contact Hours: 30 Contact Hours.

ARM 112 - Adventures in Leadership II (2)

Investigates leadership in small organizations. Covers basic troop leading procedures, military first aid and casualty evacuation concepts, creating ethical work climates, an introduction to Army organizations and installations, and basic military tactics. Introduces students to effective military writing styles. Includes lecture and laboratory.

Prerequisite: ARM 111

Contact Hours: 30 Contact Hours.

ARM 211 - Methods of Leadership and Management I (3)

Reviews leadership and management concepts including motivation, attitudes, communication skills, problem solving, human needs and behavior, and leadership self-development. Students refine written and oral communications skills and explore the basic branches of the Army, and officer and NCO duties. Students conduct practical exercises in small unit light infantry tactics and perform as mid-level leaders in the cadet organization. Includes lecture and laboratory.

Prerequisite: ARM 112

Contact Hours: 45 Contact Hours.

ARM 212 - Methods of Leadership and Management II (3)

Focuses on leadership and management functions in military and corporate environments. Studies various components of Army leadership doctrine to include the four elements of leadership, leadership principles, risk management and planning theory, the be-know-do framework, and the Army leadership evaluation program. Continue to refine communication skills. Includes lecture and laboratory.

Prerequisite: ARM 211

Contact Hours: 45 Contact Hours.

ART - Art

ART 107 - Art Education Methods (3)

Focuses on a multimedia approach to teaching art. Emphasizes strong creative presence, philosophy and techniques in drawing, painting, printmaking and other media.

Contact Hours: 45 Contact Hours.

ART 110 - Art Appreciation (3)

Introduces the cultural significance of the visual arts, including media, processes, techniques, traditions, and terminology.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

ART 111 - Art History Ancient to Medieval (3)

Provides the knowledge base to understand the visual arts, especially as related to Western culture. Surveys the visual arts from the Ancient through the Medieval periods.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

ART 112 - Art History Renaissance to Modern (3)

Provides the knowledge base to understand the visual arts, especially as related to Western culture. Surveys the visual arts from the Renaissance through the Modern periods.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

ART 113 - History of Photography (3)

Surveys the history of photography from its beginnings to the present. Emphasizes individual photographers who have made significant contributions to the field. Includes technical, artistic, commercial and social development of photography as a form of visual communication.

Contact Hours: 45 Contact Hours.

ART 117 - Fiber Design I (3)

Introduces basic fiber design. Explores basic studies and approaches to fiber design, ranging from the uses of dyes, prints, painting, and threads to an appreciation of the properties of various kinds of fiber and textiles.

Contact Hours: 90 Contact Hours.

ART 121 - Drawing I (3)

Investigates the various approaches and media that students need to develop drawing skills and visual perception.

Contact Hours: 90 Contact Hours.

ART 122 - Drawing for the Graphic Novel (3)

Introduces the drawing and fine art principles used in developing illustrations for the graphic novel. Students explore the graphic novel as a vehicle for a unique, personal venue for artistic expression. Students explore the history of the graphic novel as well as examine different artistic styles used in the development of graphic novel illustrations. The application of artistic concepts in the creation of an individual graphic work and thorough examination of course material in terms of style, design considerations and visual elements are the primary focus. Students will create images for a graphic novel, focusing on unity of style and techniques for creating images appropriate to story line using black and white or grayscale illustrations.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ART 121 (p. 137)

ART 124 - Watercolor I (3)

Provides an introduction to the basic techniques and unique aspects of materials involved in the use of either transparent or opaque water media or both. Color theory is included.

Prerequisite: ART 121 or ART 131

Contact Hours: 90 Contact Hours.

ART 127 - Landscape Drawing I (3)

Emphasizes nature, particularly landscape. Drawing outside or in view of landscape using graphite, ink, prisma-color, pastel, and washes. Students concentrate on various approaches, viewpoints, and styles and acquire expertise and interpretation in a variety of media.

Prerequisite: ART 121 or ART 131

Contact Hours: 90 Contact Hours.

ART 128 - Figure Drawing I (3)

Introduces the basic techniques of drawing the human figure.

Prerequisite: ART 121

Contact Hours: 90 Contact Hours.

ART 129 - Printmaking I (3)

Introduces the basic techniques and skills of printmaking as a fine art media. Instruction includes an understanding of visual concepts as they relate to prints. May include introduction to relief, intaglio, lithography and screen-printing techniques.

Contact Hours: 90 Contact Hours.

ART 131 - Visual Concepts 2-D Design (3)

Examines the basic elements of design, visual perception, and artistic form and composition as they relate to two-dimensional media.

Contact Hours: 90 Contact Hours.

ART 132 - Visual Concepts 3-D Design (3)

Focuses on learning to apply the elements and principles of design to three-dimensional problems.

Contact Hours: 90 Contact Hours.

ART 133 - Jewelry and Metal Work I (3)

Introduces the construction of jewelry designs in metals and small casting techniques.

Contact Hours: 90 Contact Hours.

ART 138 - Film Photography I (3)

Introduces black and white photography as a fine art medium and develops skills necessary for basic camera and lab operations.

Contact Hours: 90 Contact Hours.

ART 139 - Digital Photography I (3)

Introduces the basic concepts of digital imaging as applied to photography. Using applicable technology and hands on experience, modern developments are presented leading to the present applications of digital imaging which combine traditional photographic ideas with electronic media. Enables the student to learn how to operate image manipulation software using a

variety of scanning equipment, software tools and output devices by executing new assignments and applying these technologies to their photographic process.

Contact Hours: 90 Contact Hours.

ART 140 - Color Photography I (3)

Covers the fundamentals of color photography such as color theory and light, production, processing and printing color negatives.

Prerequisite: ART 138 or ART 139

Contact Hours: 90 Contact Hours.

ART 141 - Studio Photography (3)

Explores the creative uses of studio lighting from the perspective of fine art photography with an emphasis on portraiture, three-dimensional object photography, and two dimensional collage photography.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 138 (p. 138) or ART 139 (p. 138)

ART 142 - Landscape Photography (3)

Focuses on traditional and contemporary approaches to landscape photography. Examines technical and aesthetic aspects of landscape photography through group discussions, a field study, lectures, and print and slide critiques.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 138 (p. 138) or ART 139 (p. 138)

ART 144 - Portrait Photography (3)

Teaches the technical and aesthetic aspects of studio and location portrait photography. This course explores the personal style of portraiture, history of the field and portraiture as a visual language and creative expression. This topic also includes lighting, composition, posing, and equipment selection.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 138 (p. 138) or ART 139 (p. 138)

ART 145 - Digital Darkroom (3)

Teaches computer aided photography and darkroom techniques. The emphasis of this course is image-editing software, which can be used to color correct, retouch and composite photographic images. Other topics include image acquisition, storage, file management, special effects, hard copy and web based image output.

Contact Hours: 60 Contact Hours.

Recommended Preparation: ART 139 (p. 138)

ART 150 - Digital Art Foundations I (3)

Explores visual problem solving using digital tools for fine art. Students will learn to draw and paint in a variety of artistic modalities using color and grayscale. Two-dimensional to three-dimensional observation exercises in composition will be explored. Students will develop their skills in gesture and contour drawing, painterly expression and artistic elements while using the computer as an art tool. Use of systematic applications for development and presentation of ideas is practiced using vector and raster software. No computer experience is necessary.

Contact Hours: 90 Contact Hours.

ART 151 - Painting I (3)

Explores basic techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting to depict form and space on a two-dimensional surface.

Contact Hours: 90 Contact Hours.

ART 152 - Landscape Painting (3)

Focuses on specific landscape concerns in the painting media of the student's choice.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 151 (p. 139)

ART 153 - Pastel Painting (3)

Approaches the pastel medium in an inventive manner and introduces students to soft pastels and their many approaches to painting with them. Color theory will be taught in practice and application.

Contact Hours: 90 Contact Hours.

ART 154 - Figure Painting I (3)

Focuses on painting the human figure, and includes a brief survey of figure painting, and instruction in the fundamental methods of composition and expressions.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 128 (p. 138) and ART 151 (p. 139)

ART 155 - Portraiture (3)

Introduces portrait drawing using various media, such as pencil, charcoal, pastel, and watercolor. Head and hand structures and their individual features and composition (using art elements and principles) are emphasized.

Prerequisite: ART 121

Contact Hours: 90 Contact Hours.

ART 161 - Ceramics I (3)

Introduces traditional and contemporary ceramic forms and processes including hand building and throwing on the potter's wheel.

Contact Hours: 90 Contact Hours.

ART 162 - Handbuilt Clay I (3)

Provides instruction in several methods of hand building and the study of functional and decorative design elements.

Contact Hours: 90 Contact Hours.

ART 163 - Handbuilt Clay II (3)

Provides continued instruction in various methods of hand building.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 162 (p. 139)

ART 164 - Handbuilt Clay III (3)

Covers advanced problems with importance placed on large-scale pieces that promote creativity with techniques and combinations of different textures.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 163 (p. 139)

ART 165 - Sculpture I (3)

Introduces the fundamentals of sculpture such as modeling, casting, carving, and the processes of assemblage.

Contact Hours: 90 Contact Hours.

ART 166 - Raku (3)

Studies the Japanese art of Raku pottery. Students may hand build or make wheel thrown pots and will be involved in the unique firing process.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 161 (p. 139) or ART 162 (p. 139)

ART 167 - Sculpting the Figure (3)

Focuses on sculpting the human figure using modeling techniques in clay.

Prerequisite: None

Contact Hours: 90 Contact Hours.

ART 205 - Museum Studies (3)

Provides an overview of museum field including curatorial practice. Covers the museum as a business, its history and role in society, and planning and implementation of museum exhibitions.

Contact Hours: 45 Contact Hours.

ART 207 - Art History - 1900 to Present (3)

Provides students with the knowledge base to understand the visual arts as related to Modern and Contemporary visual art. Surveys world art of the twentieth century, including Modernism to Post-Modernism.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

ART 217 - Fiber Design II (3)

Continues instruction in fiber design.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 117 (p. 137)

ART 221 - Drawing II (3)

Explores expressive drawing techniques with an emphasis on formal composition, color media and content or thematic development.

Prerequisite: ART 121

Contact Hours: 90 Contact Hours.

ART 222 - Drawing III (3)

Offers a continued study of expressive drawing techniques and development of individual style, with an emphasis on composition and technique variation.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 221 (p. 139)

ART 223 - Drawing IV (3)

Explores advanced drawing problems with an emphasis on conceptual development and portfolio and/or exhibition quality presentation.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 222 (p. 139)

ART 224 - Watercolor II (3)

Continues the study of watercolor techniques, emphasizing original compositions and experimentation with materials. Color theory is included.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 124 (p. 138)

ART 225 - Watercolor III (3)

Concentrates on the advanced study of subject development, form, color, and theme in watercolor.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 224 (p. 140)

ART 226 - Watercolor IV (3)

Concentrates on the advanced study of techniques, individual style or expression, and consistency of compositional problem solving in watercolor.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 225 (p. 140)

ART 227 - Landscape Drawing II (3)

Focuses on drawing outdoors or in view of landscape (both rural and inner city) using graphite, ink, washes, pencils, pastels, and watercolor. Students concentrate on various approaches, viewpoints and styles and acquire expertise in a variety of media. Each student presents finished pieces matted for critique.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 127 (p. 138)

ART 228 - Advanced Figure Drawing (3)

Provides continuing study of the various methods of drawing the human figure, with emphasis on the description of form and individual style.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 128 (p. 138)

ART 229 - Printmaking II (3)

Introduces more advanced techniques and skills of printmaking as a fine art media. Instruction includes an understanding of visual concepts as they relate to prints. May include introduction to relief, intaglio, lithography and screen-printing techniques.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 129 (p. 138)

ART 230 - Color Theory (3)

Explores the properties and concepts of color for application in fine art, commercial art and/or applied arts using various traditional fine art techniques and materials.

Contact Hours: 90 Contact Hours.

Recommended Preparation: Any previous studio ART class.

ART 231 - Advanced 2D Design (3)

Provides continued study of the principles and elements of two-dimensional design with an emphasis on visual communication for further application in fine art, commercial art, and/or applied arts.

Prerequisite: ART 131

Contact Hours: 90 Contact Hours.

ART 232 - Advanced 3D Design (3)

Provides continued study of the principles and elements of three-dimensional design with an emphasis on visual communication for further application in fine art, commercial art, and/or applied arts.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 132 (p. 138)

ART 233 - Jewelry and Metal Work II (3)

Emphasizes conceptual design development, using casting and specialized techniques.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 133 (p. 138)

ART 234 - Jewelry and Metalwork III (3)

Focuses upon advanced work and emphasizes experimentation with materials and techniques, individual designs, and superior craftsmanship.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 233 (p. 140)

ART 235 - Jewelry and Metalwork IV (3)

Provides continued study of the properties of metal and stone in creating decorative work. Students employ advanced design and techniques to explore original, personal expression. A variety of materials and approaches are used in discovering new and independently creative finished pieces.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 234 (p. 140)

ART 238 - Film Photography II (3)

This course is a further exploration in film camera and lab operations with an emphasis on individual creativity. Includes the development of a comprehensive portfolio.

Prerequisite: ART 138

Contact Hours: 90 Contact Hours.

ART 239 - Digital Photography II (3)

Expands upon the beginning digital photography class. Focuses on digital photography in terms of design and communication factors including color, visual design, lighting, graphics, and aesthetics.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 139 (p. 138)

ART 240 - Color Photography II (3)

Designed for students who are approaching a personal style and aesthetic in the medium of color photography. It is an extension of Color Photography I. Personal expression is stressed through individual critiques.

Prerequisite: ART 140

Contact Hours: 90 Contact Hours.

ART 241 - Large format Photography (3)

Introduces the visual aesthetics and techniques of view camera photography. Students receive hands-on photographic

experience with the 4x5 view camera, process film, and produce prints.

Prerequisite: ART 138

Contact Hours: 90 Contact Hours.

ART 245 - Digital Photo Studio (3)

Introduces digital photography as a fine art medium, and develops skills necessary for basic operation of a digital camera and production of digital imagery.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 138 (p. 138) and ART 139 (p. 138) or permission of the instructor

ART 250 - Digital Art Foundations II (3)

Reviews and further explores the process of generating design utilizing a variety of digital tools. In this course, students will develop their proficiency with the digital tools and learn more advanced techniques in drawing and painting. Students will develop and evaluate their design-oriented projects using the elements and principles. Portfolio development, strong content, and a blending of a variety of computer art applications will be emphasized.

Prerequisite: ART 150

Contact Hours: 90 Contact Hours.

ART 251 - Painting II (3)

Further explores techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development.

Prerequisite: ART 151

Contact Hours: 90 Contact Hours.

ART 252 - Painting III (3)

Provides continued exploration of techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development.

Prerequisite: ART 251

Contact Hours: 90 Contact Hours.

ART 253 - Painting IV (3)

Explores advanced techniques, materials, and concepts used in opaque painting processes, with emphasis on the development of themes and a cohesive body of work.

Prerequisite: ART 252

Contact Hours: 90 Contact Hours.

ART 254 - Advanced Figure Painting (3)

Offers continued study of painting the human figure with advanced problem solving in composition and experimentation with materials and techniques.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 154 (p. 139)

ART 255 - Mural Painting I (3)

Introduces the student to the history, techniques, materials and concepts of mural painting with an emphasis on composition and content development.

Prerequisite: Prerequisite ART 151

Contact Hours: 90 Contact Hours.

ART 257 - Advanced Portraiture (3)

Expresses the exploration of portraiture through advanced drawing and painting techniques. Students will explore historical portraiture, contemporary attitudes of portraiture, a variety of drawing and painting media, and various support structures.

Prerequisite: ART 151 and ART 155 (New effective Spring 2015)

Contact Hours: 90 Contact Hours.

ART 261 - Ceramics II (3)

A continuation of ART 161, this course emphasizes skill, technique and form.

Prerequisite: ART 161

Contact Hours: 90 Contact Hours.

ART 262 - Ceramics III (3)

Encourages students to develop an individual style of wheel thrown and hand built ceramic forms with continuing involvement in surface treatment.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 261 (p. 141)

ART 263 - Ceramics IV (3)

Continues advanced work with emphasis on various clay bodies, unique glazes and engobes, and combining different textures and shapes, and development of personal forms.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 262 (p. 141)

ART 265 - Sculpture II (3)

Develops an understanding and focus on manipulation of three-dimensional form, with greater concentration on individual creativity and style.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 165 (p. 139)

ART 266 - Sculpture III (3)

Focuses on advanced individual sculpture projects, emphasizing experimentation with materials, accomplished technique and conceptual significance.

Contact Hours: 90 Contact Hours.

Recommended Preparation: ART 265 (p. 141)

ASE - Auto Service Technology

ASE 101 - Automotive Shop Orientation (2)

Provides students with safety instruction in the shop and on the automobile. Emphasis is placed on the proper use and care of test equipment, precision measuring and machining equipment, gaskets, adhesives, tubing, wiring, jacks, presses and cleaning equipment and techniques.

Prerequisite: minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 110 - Brakes I (2)

Covers basic operation of automotive braking systems. Includes operation, diagnosis, and basic repair of disc brakes, drum brakes, and basic hydraulic systems.

Prerequisite: ASE 101. ASE 120 is recommended and can be taken concurrently. Students will also need to meet minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 111 - Brakes II (2)

Teaches skills to perform service checks and procedures to automotive foundation braking system and to identify components and types of ABS and traction control systems.

Prerequisite: ASE 101 and ASE 110. ASE 120 is recommended and can be taken concurrently. Students will also need to meet minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 120 - Basic Automotive Electricity (2)

Introduces automotive electricity and includes basic electrical theory, circuit designs, and wiring methods. Focuses on multi-meter usage and wiring diagrams.

Prerequisite: ASE 101 (this course can also be taken concurrently), and minimum assessment scores to enroll in CCR 092 and MAT 050

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 122 - Basic Automotive Electrical Safety Systems (1)

Introduces automotive electricity and includes basic electrical theory, circuit designs, and wiring methods. Focuses on multi-meter usage and wiring diagrams.

Prerequisite: ASE 101, ASE 120, and minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 22.5 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 123 - Battery, Starting and Charging Systems (2)

Covers the operation, testing, and servicing of vehicle battery, starting, and charging systems. Includes voltage testing of starter and generator, load testing and maintenance of a battery.

Prerequisite: ASE 101 and ASE 120 (this course can also be taken concurrently) and ASE 122 and minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 130 - General Engine Diagnosis (2)

Teaches students how to perform basic engine diagnosis to determine condition of engine. This will include engine support systems.

Prerequisite: ASE 101 (this course can also be taken concurrently), and minimum assessment scores to enroll in CCR 092 and MAT 050

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 134 - Automotive Fuel and Emissions Systems I (2)

Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive fuel emission control systems, filter systems and spark plugs. Course also includes maintenance to diesel (DEF) systems.

Prerequisite: ASE 101, ASE 120, ASE 123, and ASE 231. These courses can be taken concurrently.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 140 - Suspension and Steering I (2)

Focuses on lecture and related experiences in the diagnosis and service of suspensions and steering systems and their components.

Prerequisite: ASE 101. ASE 120 is recommended and can be taken concurrently. Students will also need to meet minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 68 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 141 - Suspension and Steering II (2)

Covers design, diagnosis, inspection, and service of suspension and steering systems used on light trucks and automobiles. Course includes power steering and SRS service.

Prerequisite: ASE 101 and ASE 140. ASE 120 is recommended and can be taken concurrently. Students will also need to meet minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 68 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 150 - Manual Drive Train and Axle Maintenance (2)

Studies the operating principles and repair procedures relating to axle-shaft and universal joints.

Prerequisite: ASE 101. ASE 120 is recommended and can be taken concurrently. Students will also need to meet minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 151 - Automotive Manual Transmission/Transaxles and Clutches I (2)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive manual transmissions, transaxles and clutches and related components.

Prerequisite: ASE 101, and ASE 150. ASE 120 is recommended and can be taken concurrently. Students will also need to meet minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

ASE 152 - Manual Transmission, Transaxles and Clutches II (2)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive differentials, four wheel and all wheel drive units.

Prerequisite: ASE 101, ASE 120, ASE 150 and ASE 151. These courses can be taken concurrently.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 050 (p. 203).

ASE 160 - Automotive Engine Repair (2)

Focuses on lecture and laboratory experiences in the service of the cylinder head, valve-train components and components of the cooling system. Course also includes engine removal and re-installation and re-mounting systems.

Prerequisite: ASE 101.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 161 - Engine Repair and Rebuild (3)

Focuses on lecture and laboratory experiences in the disassembly, diagnosis and reassembly of the automotive engine. Topics include the diagnostic and repair procedures for the engine block and head assemblies.

Prerequisite: ASE 101 and ASE 160. These courses can be taken concurrently.

Contact Hours: 68 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 162 - Automotive Engine Service (2)

Covers engine sealing requirements and repair procedures; engine fasteners, bolt torque and repair of fasteners. Course will also cover cooling system and basic engine maintenance.

Prerequisite: ASE 101, ASE 160 and ASE 161. These courses can be taken concurrently.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 210 - Automotive Power and ABS Brake Systems (2)

Covers the operation and theory of the modern automotive braking systems. Includes operation, diagnosis, service, and

repair of the anti-lock braking systems, power assist units and machine operations of today's automobile.

Prerequisite: ASE 101, ASE 110 and ASE 111. These courses can be taken concurrently.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ASE 120 and minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 221 - Auto/Diesel Body Electrical (4)

Provides a comprehensive study of the theory, operation, diagnosis, and repair of vehicle accessories.

Prerequisite: ASE 101, ASE 120, ASE 122 and ASE 123. These courses can be taken concurrently.

Contact Hours: 90 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 231 - Automotive Computers and Ignition Systems (2)

Focuses on lecture and laboratory experiences in the inspection and testing of typical computerized engine control systems.

Prerequisite: ASE 101, ASE 120, ASE 122 and ASE 123. These courses can be taken concurrently.

Contact Hours: 45 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 233 - Automotive Fuel Injection and Emission Systems II (4)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of electronic fuel injection systems and modern exhaust systems.

Prerequisite: ASE 101, ASE 120, ASE 122, ASE 123, ASE 134 and ASE 231. These courses can be taken concurrently.

Contact Hours: 90 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 240 - Suspension and Steering III (2)

Covers operation of steering and power steering systems. It will also include different alignment types and procedures.

Prerequisite: ASE 101, ASE 140, and ASE 141. These courses can be taken concurrently.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ASE 120 and minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 250 - Automatic Transmission/Transaxle Service (1)

Focuses on practical methods of maintaining, servicing, and performing minor adjustments on an automatic transmission and transaxle.

Prerequisite: ASE 101. This course can be taken concurrently.

Contact Hours: 23 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 251 - Automatic Transmission/Transaxle Repair (3)

Covers diagnosis, principles of hydraulics, principles of electronic components, power flow, theory of operation, removal and re-install transmission/transaxle, replacement of components.

Prerequisite: ASE 101 and ASE 250. These courses can be taken concurrently.

Contact Hours: 68 Contact Hours.

Recommended Preparation: ASE 120 and minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 264 - Introduction to Automotive Heating and Air Conditioning (1)

Covers basic operation of the Heating and Air Conditioning components.

Prerequisite: ASE 101, ASE 120 and ASE 122. These courses can be taken concurrently.

Contact Hours: 23 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 265 - Heating and Air Conditioning Systems (4)

Emphasizes lecture and related laboratory experiences in the diagnosis and service of vehicle heating and air conditioning systems and their components.

Prerequisite: ASE 101, ASE 120, ASE 122, and ASE 264. These courses can be taken concurrently.

Contact Hours: 90 Contact Hours.

Recommended Preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

ASE 285 - Independent Study (1-6)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Contact Hours: 30 Contact Hours PER CREDIT.

ASL - American Sign Language**ASL 101 - Basic Sign Language I (3)**

Provides students with the basic knowledge of communicating with the Deaf community. Students will develop basic vocabulary and conversational skills and will be introduced to aspects of the Deaf culture and community.

Contact Hours: 45 Contact Hours.

The course does not meet the ASL requirement for admission to the Interpreter Preparation program.

ASL 102 - Basic Sign Language II (3)

Continues the sequence for students who want to learn basic conversational patterns to communicate with the Deaf community. The material covers basic vocabulary and conversational skills, and aspects of the Deaf culture and community.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ASL 101. The course does not meet the ASL requirement for admission to the Interpreter Preparation program.

ASL 121 - American Sign Language I (5)

Exposes the student to American Sign Language. Readiness activities are conducted focusing on visual/receptive skills and basic communication. Utilizes the direct experience method.

Contact Hours: 75 Contact Hours.

Students must complete this course with a grade of B or higher or pass the ASL proficiency test with a score of at least 80% or better prior to registering for ASL 122 if planning to enroll in the Interpreter Preparation program.

ASL 122 - American Sign Language II (5)

Develops a basic syntactic knowledge of American Sign Language (ASL), basic vocabulary and basic conversational skills. Incorporates vital aspects of Deaf culture and community. The direct experience method is used to enhance the learning process.

Prerequisite: ASL 121. Note: Students must complete this course with a grade of B or higher or pass the ASL 121, ASL 122 proficiency test at 80% or better prior to acceptance into the Interpreting and Transliterating Preparation program.

Contact Hours: 75 Contact Hours.

ASL 123 - American Sign Language III (5)

Provides the student an opportunity to develop a stronger grasp of American Sign Language (ASL), as well as the cultural features of the language. ASL vocabulary is also increased. The direct experience method is used to further enhance the learning process. This course is a continuation of ASL 122 with more emphasis on expressive skills in signing.

Prerequisite: ASL 122 or ASL 221 Corequisite: ASL 125 in Fall only.

Contact Hours: 75 Contact Hours.

ASL 125 - Fingerspelling (3)

Provides the student an opportunity to develop expressive and receptive finger spelling through various class activities.

Prerequisite: ASL 122 or ASL 221

Contact Hours: 45 Contact Hours.

ASL 221 - American Sign Language IV (3)

Continues from ASL 123 to provide further study of American Sign Language (ASL) and its grammar, syntax and cultural features. Helps students develop competency and fluency in the language. Variations in ASL are addressed.

Prerequisite: ASL 123 and ASL 125. Corequisite: IPP 122 unless this class has already been taken.

Contact Hours: 45 Contact Hours.

ASL 222 - American Sign Language V (3)

Continues ASL 221 with focus on assimilating previously acquired skills and knowledge and increase proficiency in understanding and using American Sign Language (ASL). Addresses debates in ASL.

Prerequisite: ASL 221

Contact Hours: 45 Contact Hours.

ASL 244 - Linguistics (3)

Investigates the structural properties of ASL including phonology, morphology, syntax, semantics, and discourse with a

focus on how visual languages differ and are similar to spoken languages.

Prerequisite: ASL 122 Corequisite: ASL 123

Contact Hours: 45 Contact Hours.

AST - Astronomy

AST 101 - Astronomy I (4)

Focuses on basic phenomena and motions of the sky, such as seasons and phases of the moon, as well as the nature of light and matter and the contents of the solar system including the planets, moons, asteroids, and comets. Incorporates laboratory experience.

Prerequisite: MAT 050 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 75 Contact Hours (45 lecture hours, 30 lab hours).

AST 102 - Astronomy II with Lab (4)

Emphasizes the structure and life cycle of the stars, the sun, galaxies, and the universe as a whole, including cosmology and relativity. Incorporates laboratory experience.

Prerequisite: MAT 050 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 75 Contact Hours (45 lecture hours, 30 lab hours).

AST 275 - Special Topics (1-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Contact Hours: 15 Contact Hours PER CREDIT.

AUT - Auto Motorsports Technology

AUT 109 - High Performance Suspension and Chassis Design (2)

Introduces the fundamentals of chassis types and components. This course includes steering and suspension component theory, tire and wheel theory, chassis design and geometry theory as applied to oval track, drag race, and road race vehicles.

Prerequisite: ASE 101, ASE 140, ASE 240 and minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ENG 131 and MAT 107.

AUT 119 - High Performance Electrical and Fuel (2)

Introduces electrical and fuel systems as applied to racing vehicles. Includes carburetion, fuel injection, fuel pumps, fuel cells, ignition systems, switches, and wiring.

Prerequisite: ASE 101, ASE 220, ASE 233 and minimum assessment scores to enroll in CCR 092 and MAT 050.

Contact Hours: 45 Contact Hours.

Recommended preparation: minimum assessment scores to enroll in ENG 131 and MAT 107.

BIO - Biology

BIO 105 - Science of Biology with Lab (4)

Examines the basis of biology in the modern world and surveys the current knowledge and conceptual framework of the discipline. Explores biology as a science - a process of gaining new knowledge - as well as the impact of biological science on society. Includes laboratory experiences. Designed for non-science majors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (45 lecture hours, 45 lab hours).

BIO 106 - Basic Anatomy and Physiology (4)

Focuses on basic knowledge of body structures and function, and provides a foundation for understanding deviations from normal and disease conditions. This course is designed for individuals interested in health care and is directly applicable to the Practical Nursing Program and the Medical Office Technology program.

Contact Hours: 60 Contact Hours.

High school biology and chemistry recommended.

BIO 111 - General College Biology I with Lab (5)

Examines the fundamental molecular, cellular and genetic principles characterizing plants and animals. Includes cell structure and function, and the metabolic processes of respiration, and photosynthesis, as well as cell reproduction and basic concepts of heredity. The course includes laboratory experience.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (60 lecture hours, 30 lab hours).

High school biology and chemistry recommended.

BIO 112 - General College Biology II with Lab (5)

A continuation of General College Biology I. Includes ecology, evolution, classification, structure, and function in plants and animals. This course includes laboratory experience.

Prerequisite: BIO 111 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (60 lecture hours, 30 lab hours).

BIO 115 - Human Genetics (3)

Focuses on a study of the inheritance of human traits. It is a non-mathematical study for the non-science major. Includes Mendelian, non-Mendelian, sex-linked, blood type traits, inherited diseases and ethics.

Contact Hours: 45 Contact Hours.

BIO 201 - Human Anatomy and Physiology I with Lab (4)

Focuses on an integrated study of the human body including the histology, anatomy, and physiology of each system. Examines molecular, cellular, and tissue levels of organization plus integuments, skeletal, articulations, muscular, nervous, and endocrine systems. Includes a mandatory hands-on laboratory experience covering experimentation, microscopy, observations, and dissection. This is the first semester of a two-semester sequence.

Prerequisite: ENG 121 or ENG 122. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (45 lecture hours, 45 lab hours).

Recommended Preparation: BIO 111 (p. 145).

BIO 202 - Human Anatomy and Physiology II with Lab (4)

Focuses on the integrated study of the human body and the histology, anatomy, and physiology of the following systems and topics: endocrine, cardiovascular, hematology, lymphatic and immune, urinary, fluid and electrolyte control, digestive, nutrition, respiratory, reproductive, and development. Includes a mandatory hands-on laboratory experience involving experimentation, microscopy, observations, and dissection. This is the second semester of a two-semester sequence.

Prerequisite: BIO 201 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (45 lecture hours, 45 lab hours).

BIO 203 - Advanced Human Anatomy (2)

Examines the gross anatomical structure of the human body and the relationship between form and function. Students will prosect a human cadaver. Systems covered will include integument, digestive, respiratory, skeletal, muscular, reproductive, endocrine, lymphatic, urinary, nervous and cardiovascular. This is a course designed for allied health, education, biology and other students who wish to obtain advanced knowledge of human anatomy. Requires hands-on laboratory experience.

Prerequisite: A or B in BIO 201 and BIO 202

Contact Hours: 60 Lab Hours.

BIO 204 - Microbiology with Lab (4)

Designed for health science majors. Examines microorganisms with an emphasis on their structure, development, physiology, classification, and identification. The laboratory experience includes culturing, identifying, and controlling microorganisms with an emphasis on their role in infectious disease.

Prerequisite: ENG 121 or ENG 122. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (45 lecture hours, 45 lab hours).

Recommended Preparation: BIO 111 (p. 145).

BIO 208 - General College Microbiology with Lab (5)

Designed for biology and health science majors. Surveys microorganisms with an emphasis on their structure, development, physiology, classification, and identification. Includes microbial diversity, functional anatomy, biochemistry, genetics, ecology, and disease. Mandatory hands-on laboratory experience covers sterile technique, microscopy, culture procedures, and biochemical and genetic analysis.

Prerequisite: BIO 111 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (60 lecture hours, 30 lab hours).

BIO 216 - Pathophysiology (4)

Focuses on the alterations in physiological, cellular, and biochemical processes, the associated homeostatic responses, and the manifestations of disease. Prior knowledge of cellular biology, anatomy, and physiology is essential for the study of pathophysiology.

Prerequisite: BIO 201 and BIO 202.

Contact Hours: 60 Contact Hours.

BIO 221 - Botany with Lab (5)

This course is designed for biology majors. It is a study of nonvascular and vascular plants. It emphasizes photosynthetic pathways, form and function, reproduction, physiology, genetics, diversity, evolution, ecology. Requires mandatory hands-on laboratory and field experience.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (60 lecture hours, 30 lab hours).

BIO 222 - General College Ecology with Lab (4)

Studies the interrelationships between organisms and their environment. Covers composition and function of aquatic and terrestrial ecosystems, population biology, pollution and the effects of man on ecosystems. Includes laboratory and field experiences.

Prerequisite: BIO 111

Contact Hours: 90 Contact Hours (45 lecture hours, 45 lab hours).

BUS - Business**BUS 102 - Entrepreneurial Operations (3)**

Covers the major aspects of small business management to enable the entrepreneur to successfully begin his/her own business. This course provides the basic concepts of marketing, principles of management and finance needed to manage a small business. Further it develops the business plan and suggests methods of obtaining the financing required to launch the business.

Contact Hours: 45 Contact Hours.

BUS 110 - Working for Yourself (2)

Introduces small business start-up and offers practical training designed to provide students with a fundamental understanding of the special concerns of self-employment. The course also provides an overview of the subjects needed to become an entrepreneur, including financing, law, insurance, government regulations, record keeping, and taxes. Guest speakers with expertise in the various topics add to the weekly discussion.

Contact Hours: 30 Contact Hours.

BUS 115 - Introduction to Business (3)

Focuses on the operation of the American Business System. Covers fundamentals of the economy, careers and opportunities, marketing, management, production, governmental regulations, tools of business and social responsibilities.

Contact Hours: 45 Contact Hours.

BUS 116 - Personal Finance (3)

Surveys the basic personal financial needs of most individuals. Emphasizes the basics of budgeting and buying, saving and borrowing money, the intricacies of home ownership, income tax and investments, and the wise use of insurance, wills and trusts.

Contact Hours: 45 Contact Hours.

BUS 120 - Introduction to E-Commerce (3)

Provides an introduction to electronic commerce-business trend of the future. Covers definition of e-commerce, technology and software requirements, security issues, electronic payment and marketing strategies. Focuses on what to expect when creating a dot-com, as well as the business-to-business use of e-commerce.

Contact Hours: 45 Contact Hours.

BUS 201 - Business Logistics Optimization (3)

Addresses and explores the principles of business logistics and optimization, utilizing database management systems and software. Students will construct and evaluate models of business systems for transportation, fleet and asset tracking, distribution and supply, and warehousing. Emphasizes decision analysis for logistics efficiency.

Contact Hours: 45 Contact Hours.

BUS 202 - Purchasing, Supply, and Sourcing Logistics (3)

Assesses the skills and abilities needed for the processes and activities for sourcing materials necessary for a business to deliver goods and services. An emphasis on the ability to formulate and manage the sourcing activities of purchasing supply, and sourcing logistics. The skills and fundamental comprehension for evaluating the sourcing of materials will be applied to business processes. Emphasizes decision analysis for logistics efficiency of purchasing, supply and sourcing.

Contact Hours: 45 Contact Hours.

BUS 203 - Introduction to International Business (3)

Provides students with an understanding of the interdisciplinary nature of international business. The course covers the development of international business; theories and methods of international trade; financing mechanisms and terms used in export documentation and export finance; the effects of economics, political and cultural environment on international business and trade; impact of geography in business

transactions; legal aspects of international business; and developing an effective international marketing strategy.

Contact Hours: 45 Contact Hours.

BUS 216 - Legal Environment of Business (3)

Emphasizes public law, regulation of business, ethical considerations, and various relationships existing within society, government, and business. Specific attention is devoted to economic regulation, social regulation, regulation and laws impacting labor-management issues, and environmental concerns. Students develop an understanding of the role of law in social, political, and economic change.

Contact Hours: 45 Contact Hours.

BUS 217 - Business Communication and Report Writing (3)

Emphasizes effective business writing and covers letters, memoranda, reports, application letters, and resumes. Includes the fundamentals of business communication and an introduction to international communication.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CCR 093 Studio D

BUS 218 - Legal Environment of Business II (3)

Focuses on the legal system and how it applies to the regulation of business and the consumer. Examines the legal entities of business organizations and includes study of the Uniform Commercial Code as it applies to commercial paper and secured transactions. Emphasizes antitrust and trade regulations, consumer protection, employment law, environmental law, and securities regulations. Ethics and social responsibility are examined.

Contact Hours: 45 Contact Hours.

BUS 226 - Business Statistics (3)

Focuses on statistical study, descriptive statistics, probability, and the binomial distribution, index numbers, time series, decision theory, confidence intervals, linear regression, and correlation. Intended for the business major.

Prerequisite: MAT 055 or MAT 099.

Contact Hours: 45 Contact Hours.

BUS 281 - Internship (2)

Provides continued instruction and the opportunity for students to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business locations and with the direct guidance of the instructor.

Prerequisite: BUS 115

Contact Hours: 45 Contact Hours PER CREDIT.

BUS 289 - Capstone (2)

Demonstrates the culmination of learning within a given program of study.

Prerequisite: BUS 115 and BUS 217

Contact Hours: 15-90 Contact Hours.

CAD - Computer-Aided Drafting

CAD 100 - Print Reading for CAD (3)

Covers linetype identification, use of lineweights, file management, prototype/template creation using the latest release of AutoCAD. Interpretation of industry standards in dimensioning, symbology, drawing notes, freehand sketching and reading working drawings. Industries discussed in this course are architectural, engineering, design related, civil/survey, manufacturing, HVAC, and welding.

Contact Hours: 67.5 Contact Hours.

CAD 101 - Computer-Aided Drafting I (3)

Focuses on basic computer aided drafting skills using the latest release of the AutoCAD software. Includes file management, Cartesian coordinate system dynamic input, drawing templates, drawing aids, linetype and lineweights, layer usage, drawing editing geometric objects, polylines splines, array, text applications, creating tables, basic dimensioning, and Help access.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: CAD 100 AEC 101, or EGT 101, or EGT 143

CAD 102 - Computer-Aided Drafting II (3)

Focuses on intermediate to advanced computer aided drafting skills using the latest release of the AutoCAD software. Includes blocks, wblocks dynamic blocks, hatching, isometric drawings, advanced dimensioning and dimension variables, layouts, paper space and viewports, templates, external references, attributes, raster images, sheet sets and printing/plotting.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: CAD 101

CAD 105 - AutoCAD for Interiors (4)

Provides an opportunity for the Interior Design student to obtain the basic skills necessary to operate Computer Aided Design (CAD) software. AutoCAD software is emphasized.

Contact Hours: 90 Contact Hours.

Recommended Preparation: CAD 100 AEC 101, or EGT 101 or EGT 143

CAD 115 - Sketchup (3)

Focuses on the understanding of basic concepts of the software program SketchUp. Students will learn how to draw and extrude building shapes, stairs, roofs, and interiors utilizing advanced modeling techniques.

Contact Hours: 67.5 Contact Hours.

CAD 153 - Introduction to Pro Engineer/Basics (3)

Introduces basic Pro/Engineer software operation including part creation, drawing creation, and assembly creation. Pro/Engineer is a 3D solid modeling software from parametric technologies.

Contact Hours: 67.5 Contact Hours.

CAD 180 - Internship (1-6)

Provides work experience in a business or industry.

Contact Hours: 45 contact hours per credit.

CAD 185 - Independent Study (1-6)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Contact Hours: 30 contact hours per credit.

CAD 201 - Computer-Aided Drafting/Custom (3)

Focuses on program customization using the latest release of CAD software. Includes: Attribute Extraction, creation of Dynamic Blocks, customizing Shortcut Menus and Double Click Actions, customizing Tool Palettes, Ribbon Tabs and Panels, User Profiles and Workspaces, basic CAD programming, path options, Sheet Set Manager, and eTransmit.

Prerequisite: CAD 102

Contact Hours: 67.5 Contact Hours.

CAD 202 - Computer-Aided Drafting/3D (3)

Focuses on construction of three-dimensional objects using the latest release of CAD software. Includes mesh modeling, surface modeling, solid modeling, extrusions, Boolean operations, 3D editing, 3D views, rendering, materials and advanced lighting, walkthrough and flyby animations and 3D Solids to 2D Layouts.

Prerequisite: CAD 102

Contact Hours: 67.5 Contact Hours.

CAD 216 - Advanced Sketchup (3)

Focuses on advanced concepts and workflow of SketchUp Pro. Students will learn to utilize SketchUp Pro with clear language, focusing their skills on learning aids, evaluation and assessment tools, resources such as other rendering software programs, and third party add-ons to be used within SketchUp Pro. Students will learn to utilize and focus on photo realization and manipulation, and their relationships between SketchUp Pro, Google Earth and Layout.

Prerequisite: CAD 115

Contact Hours: 67.5 Contact Hours.

CAD 219 - 3DS/MAX (3)

Introduces 3D model creation and editing, rendering and animation using the Autodesk 3DS Max software. Focuses on 3D geometry, texture mapping, lighting, camera placement, shading, photo-realistic rendering, animation techniques, and walk through animations.

Prerequisite: CAD 102

Contact Hours: 67.5 Contact Hours.

CAD 220 - 3DS/MAX Advanced Character Modeling (3)

Focuses on advanced 3D geometry and character construction, animation and rendering techniques using Autodesk 3DS Max software. Emphasis will include 3D geometry manipulation, character/bone/biped constructions, animation and video post-production of 3D animations.

Prerequisite: CAD 219

Contact Hours: 67.5 Contact Hours.

CAD 221 - 3DS/MAX Advanced Architectural Visualization (3)

Introduces techniques for architectural visualization using 3DS Max. Focuses include establishing workflows, advanced texturing, modeling, rendering, and animation techniques for architectural visualization.

Prerequisite: CAD 219

Contact Hours: 67.5.

CAD 222 - Navisworks/Autodesk (3)

Introduces students to the BIM management software Autodesk Navisworks. Multiple BIM models will be combined for the purposes of scheduling and clash detection.

Prerequisite: CAD 224, Recommended Prep: AEC 123

Contact Hours: 67.5 Contact Hours.

CAD 224 - Revit Architecture (3)

Introduces students to the AutoDesk Revit Architecture software. Examines the Building Information Modeling approach to 2D and 3D architectural construction documents. Students will create floorplans, elevations, sections, 3D models, perspective renderings and animations with this software application.

Prerequisite: CAD 101 or CAD 105

Contact Hours: 67.5 Contact Hours.

Recommended preparation: AEC 102

CAD 225 - Autocad Architecture (3)

Provides students with the software application training in Architectural construction drawings using industry standard software. Includes creating floorplans, sections, elevations and details necessary to produce 2D and 3D Architectural construction drawings.

Contact Hours: 67.5 Contact Hours.

Recommended preparation: AEC 102 and CAD 102

CAD 227 - Advanced Revit Architecture (3)

Focuses on the advanced applications of the AutoDesk Revit Architecture software. Includes Family Editing, Topographic Site Plans, Worksharing, Phases, Advanced Scheduling, Custom Annotation, and Presentation Techniques.

Prerequisite: CAD 224

Contact Hours: 67.5 Contact Hours.

CAD 229 - Revit Structure (3)

Introduces students to structural steel modeling and building information modeling (BIM). A steel structure is completed using Revit's design tools of parametric modeling. Foundation and framing systems, elevator shafts, stairs and ramps will be covered. Drawing annotation will include details and schedules. Final drawing sheets will be generated and plotted.

Prerequisite: AEC 123

Contact Hours: 67.5 Contact Hours.

CAD 233 - Civil 3D/Autodesk 3D (3)

Provides students with the basics to advanced software application necessary to produce 3D Civil models and 2D drawings using the latest release of the Civil 3D software. This course will cover topics including components and program interface, linework, geometry, 2D to 3D Civil CAD applications.

Prerequisite: CAD 202 & EGT 143

Contact Hours: 67.5 Contact Hours.

CAD 240 - Inventor I/Autodesk (3)

Introduces basic non-parametric 3D concepts to build confidence in 3D thinking and moves on to three-dimensional parameters. The student learns to construct, modify, and manage complex parts in 3D space as well as how to produce 2D drawings from the 3D models.

Prerequisite: EGT 101 & CAD 102

Contact Hours: 67.5 Contact Hours.

CAD 244 - Advanced Inventor (3)

This course focuses on the advanced applications of the parametric software Inventor. Includes management of design data, advanced assembly and analysis of model creations and constraints, documentation of bill of materials and parts lists, rendering and animation and testing a model assembly.

Prerequisite: CAD 240

Contact Hours: 67.5 Contact Hours.

CAD 255 - Solidworks/Mechanical (3)

Introduces basic non-parametric 3D concepts to build confidence in 3D thinking and progresses to three-dimensional parameters. The student learns to construct, modify, and manage complex parts in 3D space as well as to produce 2D drawings from the 3D models.

Prerequisite: EGT 101 & CAD 102

Contact Hours: 67.5 Contact Hours.

CAD 259 - Advanced Solidworks (3)

This course focuses on the advanced applications of parametric software Solidworks. Includes management of design data, advanced assembly and analysis of model creations and constraints, documentation of bill of materials and parts lists, rendering and animation and testing a model assembly.

Prerequisite: CAD 255

Contact Hours: 67.5 Contact Hours.

See the list of Specialized Computer-Aided Drafting Courses on the first page of this Course Offerings section.

CAD 262 - 3D Printing (3)

Provides the student with the ability to blend the virtual and real design worlds together through the use of 3D Scanning, 3D CAD Modeling, and 3D Printing.

Prerequisite: CAD 202, CAD 219, CAD 255 or CAD 224

Contact Hours: 67.5 Contact Hours.

CAD 289 - Capstone (1-6)

A demonstrated culmination of learning within a given program of study.

Prerequisite: CAD 201, CAD 202, & CAD 219. Recommended Preparation: CAD 224, CAD 240, or CAD 255

Contact Hours: 15-45 Contact Hours PER CREDIT.

CCR - College Composition and Reading

CCR 091 - Composition and Reading Lab (1)

Supports skill development for students registered in CCR 092 College Composition. Topics covered in the course include those

defined in CCR 092 and/or any foundational skills needed by the student. Any student enrolled in CCR 091 is required to co-enroll in CCR 092.

Contact Hours: 15 Contact Hours.

CCR 092 - Composition and Reading (5)

Integrates and contextualizes college level reading and writing. Students will read and understand complex materials and respond to ideas and information through writing informative and/or persuasive texts.

Prerequisite: Appropriate diagnostic scores required.

Contact Hours: 75 Contact Hours.

CCR 093 - Studio D (3)

Integrates and contextualizes reading and writing strategies tailored to a co-requisite 100-level course within one or more of the four discipline strands. The four discipline strands are defined as: Communications, Science, Social Science, and Arts and Humanities. Non-GT courses are not eligible for this consideration. Students will read and understand complex discipline-specific materials, and respond to ideas and information through writing informative and/or persuasive texts.

Prerequisite: Appropriate diagnostic scores required.

Contact Hours: 45 Contact Hours.

CCR 094 - Studio 121 (3)

Integrates and contextualizes reading and writing strategies tailored to co-requisite ENG 121 coursework. Students will read and understand complex materials, and respond to ideas and information through writing informative and/or persuasive texts.

Prerequisite: Appropriate diagnostic scores required.

Contact Hours: 45 Contact Hours.

CHE - Chemistry

CHE 101 - Introduction to Chemistry I with Lab (5)

Includes the study of measurements, atomic theory, chemical bonding, nomenclature, stoichiometry, solutions, acid and base, gas laws, and condensed states. Laboratory experiments demonstrate the above concepts qualitatively and quantitatively. Designed for non-science majors, students in occupational and health programs, or students with no chemistry background.

Prerequisite: MAT 050 OR MAT 055 OR MAT 090 or high school algebra within the last 7 years. CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (60 lecture hours, 30 lab hours).

CHE 105 - Chemistry in Context with Lab (5)

Covers the study of measurements, matter, molecules, atoms, chemical bonding, nomenclature, energy, acids, bases, and nutrition. Course work examines chemistry in the modern world and surveys the current knowledge as well as the conceptual framework of the discipline. Chemistry as a science is explored, as is the impact of chemistry on society. This course includes laboratory experience and is designed for non-science majors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours.

CHE 111 - General College Chemistry I with Lab (5)

Focuses on basic chemistry and measurement, matter, chemical formulas, reactions and equations, stoichiometry and thermochemistry. This course covers the development of atomic theory culminating in the use of quantum numbers to determine electron configurations of atoms, and the relationship of electron configuration to chemical bond theory and molecular orbital theory. The course includes gases, liquids, and solids and problem-solving skills are emphasized through laboratory experiments.

Prerequisite: CHE 101 or equivalent within the last 7 years. CCR 092, CCR 093, or CCR 094 or equivalent testing scores.

Corequisite: MAT 121 unless this class has already been taken.

Offered: *(GT-SC1).

Contact Hours: 105 Contact Hours (60 lecture hours, 45 lab hours).

CHE 112 - General College Chemistry II with Lab (5)

Presents concepts in the areas of solution properties, chemical kinetics, chemical equilibrium, acid-base and ionic equilibrium, thermodynamics, electrochemistry, nuclear chemistry, and organic chemistry. This course emphasizes problem solving skills and descriptive contents for these topics. Laboratory experiments demonstrate qualitative and quantitative analytical techniques.

Prerequisite: CHE 111 within the last 7 years and MAT 121 within the last 7 years. CCR 092, CCR 093, or CCR 094 or equivalent testing scores.

Offered: *(GT-SC1).

Contact Hours: 105 Contact Hours (60 lecture hours, 45 lab hours).

CHE 205 - Introductory Organic Chemistry with Lab (5)

Focuses on compounds associated with the element carbon, their reactions, and synthesis. Includes structure, physical properties, reactivities, synthesis and reactions of aliphatic hydrocarbons and selected functional group families including alcohols, ethers, aromatics, aldehydes, ketones, amines, amides, esters, and carboxylic acids. Covers nomenclature, stereochemistry, and reaction mechanisms. Includes reactions and reaction mechanisms of aromatic compounds. Designed for students needing one semester of organic chemistry.

Prerequisite: CHE 101 or (CHE 111 and CHE 112) both within the last 7 years.

Contact Hours: 105 Contact Hours (60 lecture hours, 45 lab hours).

CHE 211 - Organic Chemistry I with Lab (5)

Focuses on compounds associated with the element carbon. Includes structure and reactions of aliphatic hydrocarbons and selected functional group families. Covers nomenclature of organic compounds, stereochemistry, reaction mechanisms such as SN1, SN2, E1 and E2. Laboratory experiments demonstrate

the above concepts plus the laboratory techniques associated with organic chemistry.

Prerequisite: CHE 112 within the last 7 years.

Contact Hours: 105 Contact Hours (60 lecture hours; 45 lab hours).

CHE 212 - Organic Chemistry II with Lab (5)

Explores the chemistry of carbon-based compounds, their reactions and synthesis including the structure, physical properties, reactivities and synthesis of organic functional groups not covered in Organic Chemistry I. The course explores functional groups including alcohols, ethers, aromatics, aldehydes, ketones, amines, amides, esters, and carboxylic acids and the reactions and reaction mechanisms of aromatic compounds. An introduction to biochemical topics if time permits. Laboratory experiences demonstrate the above concepts and the laboratory techniques associated with organic chemistry.

Prerequisite: CHE 211 within the last 7 years.

Contact Hours: 105 Contact Hours (60 lecture hours; 45 lab hours).

CHI - Chinese

CHI 101 - Conversational Chinese I (3)

Introduces beginning students to conversational Chinese and focuses on understanding and speaking Chinese. Covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

Contact Hours: 45 Contact Hours.

CHI 102 - Conversational Chinese II (3)

Continues the sequence for students who wish to understand and speak Chinese. Covers basic conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

CHI 111 - Chinese Language I (5)

Focuses on the development of functional proficiency in listening, speaking, reading and writing the Chinese language. Note: The order of the topics and methodology varies according to individual texts and instructors.

Contact Hours: 75 Contact Hours.

CHI 112 - Chinese Language II (5)

Continues Chinese Language I in the development of functional proficiency in listening, speaking, reading and writing the Chinese language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

Contact Hours: 75 Contact Hours.

Recommended Preparation: CHI 111

CHI 211 - Chinese Language III (3)

Focuses on the further development of functional proficiency in listening to, speaking, reading and writing the Chinese language.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CHI 112.

CIS - Computer Information Systems

CIS 115 - Introduction to Computer Information Systems (3)

Focuses on an overview of the needs for and roles of computer information systems. Emphasizes computer requirements in organizations, history, hardware functions, programming, systems development, and computer operations. Introduces computer applications.

Contact Hours: 45 Contact Hours.

CIS 118 - Introduction to PC Applications (3)

Introduces basic computer terminology, file management, and PC system components. Provides an overview of office application software including word processing, spreadsheets, databases, and presentation graphics. Includes the use of a web browser to access the Internet.

Contact Hours: 45 Contact Hours.

CIS 128 - Operating System: Using Microsoft Windows (3)

Introduces the functions and capabilities of an operating system, including configuring and modifying the operating system environment.

Contact Hours: 45 Contact Hours.

CIS 135 - Complete PC Word Processing: Word (3)

Explores a complete array of word processing skills. The skills needed to create, edit, format, and printing documents are covered. Other topics include character, paragraph, and page formats, the use of spelling checkers and thesaurus, hyphenation, tables, mail merge, document design, and graphics.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 118.

CIS 145 - Complete PC Database: ACCESS (3)

Explores 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.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 118

CIS 146 - Database Application Development: ACCESS (3)

Covers the PC database concepts necessary to create database applications. Includes programming, shared files, resource locking, and database recovery.

Prerequisite: CIS 145

Contact Hours: 45 Contact Hours.

Recommended Preparation: CSC 220

CIS 155 - PC Spreadsheet Concepts: Excel (3)

Exposes the student to a wide range of uses of the electronic spreadsheet with special emphasis 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.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 118

CIS 167 - Desktop Publishing (3)

Introduces the concepts and applications for desktop publishing using word processing software. Emphasizes page layout and design with techniques for incorporating text and graphics and final production of printed documents.

Contact Hours: 45 Contact Hours.

Recommended Preparation: Knowledge of word processing

CIS 202 - Automated Project Management: MS Project (3)

Provides an in depth exploration of project management techniques that use software to automate the project management processes. The course emphasizes project management strategies, goal setting and communication with team members, management and vendors. Critical thinking, discussion, and real world projects will be used to explore the creation of a task list, resource assignment and leveling. Students will learn to use GANTT charts, milestones, Critical Path Methodology, PERT, project tracking and reporting.

Contact Hours: 45 Contact Hours.

Recommended Preparation: MAN 241 (p. 202)

CIS 218 - Advanced PC Applications (3)

Covers the advanced capabilities of a PC software applications suite. Emphasizes solving business problems by integrating data from all software applications that facilitate the production of useful information. Printed documents, reports, slides, and forms are produced to communicate information.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 118

CIS 220 - Fundamentals of UNIX (3)

Covers the structure and fundamentals of the UNIX operating system. Includes the files system and file processing, various utility programs, and shell, multi-user operation, text processing and communications.

Contact Hours: 45 Contact Hours.

CIS 222 - UNIX/Linux Server Admin (3)

Provides students with knowledge and skills to configure, administer and secure data, users, and services in a UNIX/Linux server environment.

Prerequisite: CIS 223 effective Spring 2014

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 223 (p. 152) or CNG 201 (p. 154)

CIS 223 - Linux (3)

Introduces students to the concepts of installing, configuring, and managing the Linux operating system. Topics covered include working with various desktops, use of file system commands, and management of user and group permissions.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 115 (p. 151)

CIS 232 - UNIX Shell Programming (3)

Covers simple scripts to automate frequently executed commands followed by an explanation of adding conditional logic, user interaction, loops, menus, traps, and functions to enhance the productivity and effectiveness of the user. In

addition, students explore in detail Bourne and Korn shell scripting languages.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 220 and CIS 223.

CIS 240 - Database Design and Development (3)

Introduces the basic concepts of relational databases, data storage, and retrieval. Covers database design, data modeling, transaction processing and introduces the Structured Query Language for databases.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 145.

CIS 243 - Introduction to SQL (3)

Introduces students to Structured Query Language (SQL). Students learn to create database structures and store, retrieve and manipulate data in a relational database. Students create tables and views, use indexes, secure data, and develop stored procedures and triggers.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 145 (p. 151)

CIS 246 - Oracle Database Administration I (4)

Provides a foundation in basic Oracle architecture, storage structure and database administrative tasks. Emphasizes the knowledge and skills to create databases and data dictionary views, and to manage Oracle instances, tables, table spaces, data files, control files, and redo log files and rollback segments.

Contact Hours: 60 Contact Hours.

Recommended Preparation: CIS 240.

CIS 252 - Implement & Maintain MS SQL Svr (3)

Provides students with the knowledge and skills to implement and maintain a Microsoft SQL Server database. The course focuses on teaching students how to use SQL Server features and tools related to maintaining a database.

Contact Hours: 45 Contact Hours.

Recommended Preparation CIS 244

CIS 267 - Management of Information Systems (3)

Introduces the concepts and techniques of managing computer-based information resources. Includes hardware, software, personnel, control techniques, and the placement and integration of information systems resources within the organization.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 118 and two semesters of computer classes.

CIS 268 - Systems Analysis and Design I (3)

Introduces the student to the materials, techniques, procedures, and human inter-relations involved in developing computer information systems. Includes the systems approach, fact gathering techniques, forms design, input/output, file design, file organization, various charting techniques, system audits on controls, project management, implementation, and evaluation.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 115 or two semesters of computer courses

CIS 280 - Internship (1-12)

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 business locations and with the direct guidance of the instructor.

Prerequisite: To be determined by the program director.

Contact Hours: 45 Contact Hours PER CREDIT.

CNG - Computer Networking

CNG 101 - Networking Fundamentals (3)

Introduces network fundamentals using the OSI (Open Systems Interconnection) model and TCP/IP (Transmission Control Protocol/Internet Protocol) suite, fundamentals of Ethernet, IP addressing, and building simple LANs (Local Area Networks).

Contact Hours: 45 Contact Hours.

CNG 120 - A+ Certification Preparation (4)

Prepares students for the CompTIA A+ certification examination. PC hardware and operating system installation, configuration and troubleshooting are practiced and reviewed using A+ techniques.

Contact Hours: 60 Contact Hours.

CNG 121 - Computer Technician I: A+ (4)

Provides students with an in-depth look at personal computer hardware, introduces O.S. features and security concepts, and covers interpersonal skills, all of which are necessary for a successful entry-level computer service technician position. Provides extensive hands-on work with computer systems, PC setup and configuration, and basic maintenance and troubleshooting. This course helps prepare you for the CompTIA A+ Essentials Exam.

Contact Hours: 60 Contact Hours.

CNG 122 - Computer Technician II: A+ (4)

Provides students with an in-depth look at Operating System support, maintenance, and troubleshooting, and an overview of hardware, security concepts, and interpersonal skills, all of which are necessary for a successful entry-level computer service technician position. Provides extensive hands-on work with Windows 2000 and/or XP, including using common GUI and command line tools, registry editing, System backup and Recovery, Networking, and O.S. Troubleshooting. This course helps prepare you for the CompTIA A+ 602 Exam..

Contact Hours: 60 Contact Hours.

CNG 124 - Networking I: Network + (3)

Provides students with the knowledge necessary to understand, identify and perform necessary tasks involved in supporting a network. Covers the vendor-independent networking skills and concepts that affect all aspects of networking, such as installing and configuring the TCP/IP. This course also prepares students for the Networking II: Network + course.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 122 (p. 153)

CNG 125 - Networking II: Network + (3)

Continues to provide students with the knowledge necessary to implement and support a network. Focuses on the vendor-independent networking skills and concepts that affect all aspects of networking. The Networking I and II: Network + courses prepare students for the Network + certification.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 124 (p. 153)

CNG 129 - Wireless LAN Fundamentals (3)

Implement and troubleshoot Wireless Local Area Networks (WLANs). This course includes WLAN planning, design, installation, and configuration; WLAN security issues and vendor interoperability strategies; and mobile technology.

Contact Hours: 45 Contact Hours.

CNG 131 - Principles of Information Assurance (3)

Provides skills and knowledge required to survey key issues associated with protecting information assets, determine the levels of protections and responses to security incidents, and design a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. Students learn to inspect and protect information assets, detect and react to threats to information assets, and examine pre- and post-incident procedures, and technical and managerial responses. Students learn about information security planning and staffing functions.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 132.

CNG 132 - Network Security Fundamentals (3)

Delivers a comprehensive overview of network security, including general security concepts. Communication Security is studied, including remote access, e-mail, the Web, directory and file transfer, and wireless data. Common network attacks are introduced. Cryptography basics are incorporated, and operational/organizational security is discussed as it relates to physical security, disaster recovery, and business continuity. Computer forensics is introduced.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 101 or CNG 125

CNG 133 - Firewalls/Network Security (3)

Teaches students the basics of network firewall security. It covers basic installation techniques, discusses how to make an intelligent choice of firewall technology, and presents basic firewall troubleshooting.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 101 or CNG 125

CNG 136 - Guide to IT Disaster Recovery (3)

Presents methods to identify technology and communication infrastructure vulnerabilities and appropriate countermeasures to prevent and mitigate failure risks for an organization. The course will take an enterprise-wide approach to developing a disaster recovery plan.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 132

CNG 142 - Intro to Cloud Computing Concepts (3)

Educates students on the differences between today's PC/server based networks and cloud computing. Students investigate the benefits of cloud computing, cloud models and solutions, and deployment methods. Students study hardware, storage, thin clients and virtualization in the cloud. The course also introduces students to cloud applications and cloud-based office productivity software. Students learn how they can apply cloud computing to address corporate information technology challenges.

Contact Hours: 45 Contact Hours.

CNG 165 - Convergent Technologies (3)

Summarizes telecommunications with a survey of how data, voice, video technologies are converging for telecommunications systems. Covers wireless, ISDN, PCM, DSL, cable, IP voice, and computer networks.

Contact Hours: 45 Contact Hours.

CNG 201 - Linux Configuration: (OS) (3)

Install a Linux operating system (OS). Configure and manage OS using command line interface (CLI) and text editor. Topics include installation and configuration of updates, services, file system, users and groups, file and folder permissions, networking, and remote access.

Contact Hours: 45 Contact Hours.

CNG 202 - Unix/Linux Server Administration (3)

Provides students with the knowledge and skills required to configure, administer and secure data, users and services in a UNIX or Linux server environment. Emphasis will be on command-line interface (CLI). Topics will also include system monitoring, performance tuning, troubleshooting and interoperability with Windows servers and clients.

Contact Hours: 45 Contact Hours.

CNG 203 - Advanced Linux Server Administration (3)

Administer a Linux multi-server environment by building on previous Linux server environment knowledge. Emphasizes remote access to servers, and automation of system administrative tasks using shell scripts with advanced features and higher level language (HLL).

Contact Hours: 45 Contact Hours.

CNG 209 - MS Server Active Direct Configuration (4)

Provides students with the knowledge and skills to configure Active Directory Domain Services in a distributed environment, implement Group Policies, perform backup and restore, and monitor and troubleshoot Active Directory related issues.

Contact Hours: 60 Contact Hours.

Recommended Preparation: CNG 212

CNG 210 - MS Network Infrastructure Configuration (4)

Provides students with the knowledge and skills to configure and troubleshoot a Windows Server 2008 network infrastructure. Students will learn to implement and configure secure network access and implement fault tolerant storage technologies.

Students will gain an understanding of the network technologies most commonly used with Windows Server 2008 and IP-enabled networks. Students will also learn how to secure servers and maintain update compliance.

Contact Hours: 60 Contact Hours.

CNG 211 - Windows Configuration (3)

Provides students with the knowledge and skills necessary to address the implementation and desktop support needs of customers who are planning to deploy and support Microsoft Windows client O.S. in a variety of network operating system environments.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 101 or CNG 125

CNG 212 - Configuring Windows Server (4)

Provides students with the knowledge and skills that are required to install and configure a Microsoft Windows Server. This course helps prepare students for a MTA (Microsoft Technology Associate) and/or MCSA (Microsoft Certified Solutions Associate) exams.

Contact Hours: 60 Contact Hours.

Recommended Preparation: CNG 211 (p. 154)

CNG 213 - Administering Windows Server (4)

Provides students with the knowledge and skills required to administer Microsoft Windows Servers. This course helps prepare students for the current MCSA (Microsoft Certified Solutions Associate) exam.

Contact Hours: 60 Contact Hours.

Recommended Preparation: CNG 212

CNG 214 - Adv Windows Server Admin (4)

Provides students with advanced knowledge and skills to configure and administer Windows Server infrastructure. This course helps prepare students for the current MCSA (Microsoft Certified Solutions Associate) exam.

Contact Hours: 60 Contact Hours.

Recommended Preparation: CNG 213

CNG 215 - Windows Automation (3)

Instructs students in Windows automation using command line or Powershell. Student will build on previous server environment knowledge to learn command line utility and/or Powershell cmdlets, and develop scripting skills for automating administrative tasks in a Windows environment.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 212

CNG 217 - Implementing Security for Microsoft Networks (4)

Provides students with the knowledge and skill necessary to implement, manage, maintain, and troubleshoot security in a Microsoft network infrastructure. Students will learn to plan and configure a Microsoft Public Key Infrastructure (PKI) system.

Contact Hours: 60 Contact Hours.

Recommended Preparation: **CNG 101 or CNG 125**

CNG 230 - Fast Track CCNA 1 and 2 (5)

Presents the first of two parts of the CCNA certification preparation course for students that already have a solid networking background. It will consist of internetworking, internet protocols, IP subnetting, introduction to the Cisco IOS, IP routing, EGRIP, and OSPF.

Contact Hours: 75 Contact Hours.

Recommended Preparation: CNG 122 (p. 153) and CNG 124 (p. 153)

CNG 231 - Fast Track CCNA 3 and 4 (5)

Presents the second of two parts of the CCNA certification preparation course for students who have completed the CCNA I course. It will consist of VLSM, Layer 2 switching, VLANs, ACLs, PPP, Frame Relay, DDR and ISDN.

Contact Hours: 75 Contact Hours.

Recommended Preparation: CNG 230 (p. 155)

CNG 232 - Managing LAN Switches (3)

Prepares students to build, configure, and manage switches in a LAN with emphasis on vendor interoperability.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 101 or CNG 125

CNG 233 - Routers and Routing Protocols (3)

Prepares students to build, configure, and manage routers and routing protocols with emphasis on vendor interoperability.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 101 or CNG 125

CNG 240 - Virtual Environment Admin (3)

Build and administer a hypervisor environment. Includes building of virtual machine (VM) infrastructure and skills such as patching, backing up and securing of both hypervisor and virtual machines.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 211 or CNG 212 or CNG 201

CNG 241 - Information Storage and Management (3)

Teaches students to configure, manage, and backup data using current information storage technologies.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 211 or CNG 212 or CNG 201

CNG 242 - Cloud Computing (3)

Installs, configures and manages a cloud environment. Builds on knowledge of hypervisor and virtual machine environments.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 211 or CNG 212 or CNG 201

CNG 243 - Cloud Security and Cyber Law (3)

Introduces concepts of cloud architecture, cloud security, and the law as it pertains to cloud deployment. Focuses on the mechanics of security in the cloud service models: Infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS).

Contact Hours: 45 Contact Hours.

CNG 251 - Anti Virus Concepts (3)

Prepares the student for virus eradication. Focuses on how viruses work, how they are designed and how viruses are written. Emphasizes virus eradication and cleaning.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 132

CNG 254 - Data Encryption (3)

Exposes the student to data encryption models. Examines the differences between data storage including Microsoft, Novell Netware and UNIX. Includes encryption and data transmission. Covers encryption over various networks including the Internet.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 132

CNG 257 - Network Defense & Counter Measures (3)

Examines the tools, techniques and technologies used in the technical securing of information assets. This course provides in-depth information of the software and hardware components of Information Security and Assurance. Topics include firewall configurations, hardening Unix and NT servers, Web and distributed systems security and specific implementation of security modes and architectures. The curriculum maps to the Security Certified Network Professional (SCP) Network Defense and Countermeasures exam.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CNG 132

CNG 258 - Digital forensics (4)

Exposes the student to the field of digital computer forensics and investigation. This class provides the student with methods to properly conduct a digital forensics investigation including a discussion of ethics. Topics covered include fundamental concepts, history of computer forensics, file structures, data recovery techniques, computer forensic tools and analyses.

Contact Hours: 60 Contact Hours.

Recommended Preparation: CNG 132

CNG 259 - Enterprise Security (4)

This course challenges students to combine the skills learned in previous coursework (or work experience) and apply them in whole to a mock business IT environment. Students will work in their own virtualized server environment, complete with servers, routers, firewalls, VPN, IDS/IPS, wireless and other current technologies to develop a security policy and framework using risk analysis and risk management techniques.

Contact Hours: 60 Contact Hours.

Recommended Preparation: CNG 132

CNG 280 - Internship (3)

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 business location and with the direct guidance of the instructor/ coordinator.

COM - Communication

COM 115 - Public Speaking (3)

Combines the basic theories of communication with public speech performance skills. Emphasis is on speech preparation, organization, support, audience analysis, and delivery.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ENG 090, CCR 092, CCR 093, or CCR 094 with appropriate diagnostic score to place into ENG 121. COM 115 or COM 125 is a CCCS requirement for A.A./A.S. degrees.

COM 125 - Interpersonal Communication (3)

Examines the communication involved in interpersonal relationships occurring in family, social, and career situations. Relevant concepts include self-concept, perception, listening, nonverbal communication, and conflict.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ENG 090, CCR 092, CCR 093, or CCR 094 with appropriate diagnostic score to place into ENG 121. COM 115 or COM 125 is a CCCS requirement for A.A./A.S. degrees.

COM 209 - Intrapersonal Communication (3)

Introduces the study of intrapersonal communication (communication with self) and emphasizes understanding of one's past experiences in learning how to set goals, accomplish life objectives, communicate with self, and plan for the future. This course includes individualized research, journaling, creativity explorations, lessons involving an individual's past and present hopes and dreams, goal setting for the future, positive self-exploration techniques and styles, networking, personal assessments, and creativity enhancement.

Contact Hours: 45 Contact Hours.

COM 217 - Group Communication (3)

Examines group communication theories, with an emphasis on leadership and group behaviors. The course provides opportunities for group participation.

Contact Hours: 45 Contact Hours.

Recommended Preparation: COM 125.

COM 220 - Intercultural Communication (3)

Explores the link between culture and communication, and will develop and/or enhance communication skills and the abilities appropriate to a multicultural society. Emphasis will be on understanding diversity within and across cultures. Relevant concepts include perception, worldview, context, ethics, language, and nonverbal communication.

Prerequisite: ENG 090, CCR 092, CCR 093, or CCR 094 with appropriate diagnostic score to place into ENG 121. Note: CCR courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

Recommended Preparation: COM 125.

COM 225 - Organizational Communication (3)

Focuses on the role of communication theory and skills as they apply to business and organizational settings. Topics include organizational and leadership models; effective communication

skills with peers, superiors, and subordinates; environmental factors impacting communication; and interviewing skills.

Contact Hours: 45 Contact Hours.

Recommended Preparation: COM 115 or COM 125.

COM 226 - Oral Interpretation (3)

Exposes the student to the artistic, interpretive, and communicative potential to be found in the reading and performance of great literature and rhetoric such as is found in prose, poetry, and drama.

Contact Hours: 45 Contact Hours.

Recommended Preparation: COM 115.

COM 230 - Argumentation and Debate (3)

Introduces the student to the theory of argumentation, including reasoning, evidence, refutation, critical thinking, and extemporaneous speaking. The course includes practice in preparation and oral analysis of selected arguments and styles of debating.

Prerequisite: COM 115

Contact Hours: 45 Contact Hours.

CRJ - Criminal Justice

CRJ 110 - Intro to Criminal Justice (3)

Introduces students to the basic components of the criminal justice system in the United States. Concepts of crime, perspectives and views of crime, crime data, theory, victimization, and law are discussed. Particular attention to the criminal justice process, interaction and conflict between criminal justice agencies, and current criminal justice issues are examined.

Offered: *(GT-SS3) effective Summer 2015.

Contact Hours: 45 Contact Hours.

Prerequisite: CCR 092 (p. 150), CCR 093 (p. 150), CCR 094 (p. 150), ENG 060, or ENG 090. Co-requisite: CCR 092 (p. 150), CCR 093 (p. 150), or CCR 094 (p. 150)

CRJ 125 - Policing Systems (3)

Examines policing in the United States, including: historical foundations, emerging issues, and the relationship between law enforcement and the community. The various types of law enforcement agencies, their administrative practices, and the behavior of those involved in the delivery of police services are examined from the perspective of democratic values, racial and ethnic diversity, and societal perceptions of police effectiveness. Career requirements, including current and future trends, are also presented.

Prerequisite: CRJ 110 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

CRJ 127 - Crime Scene Investigation (3)

Focuses on basic procedure in crime scene management to include photography and preparing initial reports and sketches. Includes processing evidence and related criminalistic procedures. Covers interviewing suspects, witnesses and victims to include the recording of identifications and descriptions.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CRJ 110 (p. 156)

CRJ 135 - Judicial Function (3)

Examines the criminal process with an analysis of the major judicial decision-makers, i.e., prosecutors, defense attorneys, judges, and the discretionary aspects of adjudication.

Prerequisite: CRJ 110 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

CRJ 145 - Correctional Process (3)

Examines the history and total correctional process from law enforcement through the administration of justice, probation, prisons, correctional institutions, and parole. Also examines the principles, theories, phenomena and problems of the crime, society, and the criminal justice system from the perspective of criminology and the criminal justice system in general. Emphasizes the role of sociology and other interdisciplinary approaches to the field of corrections and society's response.

Prerequisite: CRJ 110 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

CRJ 205 - Principles of Criminal Law (3)

Focuses on common law and statutory law crimes, the Model Penal Code, elements defining crimes and penalties, defenses to criminal accusations, and definitions and distinctions between criminal and civil law.

Prerequisite: CRJ 110 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

CRJ 209 - Criminal Investigations I (3)

Covers the function of the preliminary investigation at a crime scene to include securing the scene, crime scene searchers, police drawings, and recognition and collection of evidence.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CRJ 110 (p. 156)

CRJ 230 - Criminology (3)

Exploration of the question of crime causation from legal, social, political, psychological and theoretical perspectives. Covers the history and development of criminology.

Prerequisite: CRJ 110 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

CRJ 231 - Intro to Forensic Science & Criminalistics (3)

Exploration of the fundamentals of forensic science that are essential for gathering evidence at the crime scene and analyzing it in the crime laboratory.

Contact Hours: 45 Contact Hours.

CRJ 235 - Delinquent Behavior (3)

Focuses on the adolescent who violates social and legal norms and the consequences for the individual and society. Emphasizes the social and psychological factors influencing individual delinquent patterns.

Prerequisite: CRJ 110 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

CRJ 236 - Criminal Justice Research Methods (3)

Introduces and applies methods of criminal justice and criminology with an emphasis on the scientific method and the

role of empirical inquiry into criminal justice and criminology. This course will include the study of methodologies of data collection and analysis, the logic of research, the role of theory, measurement, sampling and research designs. Field research and the professional norms and ethics of criminal justice and criminology research will also be covered.

Prerequisite: 45 Contact Hours. CRJ 110 with a grade of "C" or better.

CRJ 257 - Victimology (3)

Demonstrates to the student the role the crime victim plays in the criminal justice system. The traditional response that a crime victim receives from the system will be studied and the psychological, emotional and financial impact these responses have on victimization will be analyzed.

Prerequisite: CRJ 110 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

CRJ 268 - Criminal Profiling (3)

Examines theories of crime causation with respect to crimes committed by the most violent offenders in society. Identifies research done, and the history of Criminal Personality Profiling, beginning with the earliest explanations through the beliefs of modern science, as well as psychological and sociological explanations. Identifies various known offenders, examines their backgrounds, and explains how current research into homicide, sexual offenses and serial killers can provide clues to the identity of unknown offenders.

Prerequisite: CRJ 110 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

CSC - Computer Science

CSC 119 - Introduction to Programming (3)

Focuses on a general introduction to computer programming. Emphasizes the design and implementation of structured and logically correct programs with good documentation. Focuses on basic programming concepts, including numbering systems, control structures, modularization, and data processing. A structured programming language is used to implement the student's program designs.

Contact Hours: 45 Contact Hours.

Recommended Preparation or currently enrolled in: MAT 055

CSC 160 - Computer Science I: (C++) (4)

Introduces students to the discipline of computer science and programming. Algorithm development, data representation, logical expressions, sub-programs and input/output operations using a high-level programming language are covered. Intensive lab work outside of class time is required.

Contact Hours: 60 Contact Hours.

Recommended Preparation: CSC 119 and MAT 055

CSC 161 - Computer Science II (4)

Continues the structured algorithm development and problem solving techniques begun in Computer Science I. Enables students to gain experience in the use of data structures and design of larger software projects. Requires intensive computer laboratory experience.

Contact Hours: 60 Contact Hours.

Recommended Preparation: CSC 160 and completed or currently enrolled in MAT 121

CSC 220 - Intro to Microsoft Visual Basic.NET (3)

Provides students with the knowledge and skills needed to develop applications in Microsoft Visual Basic .NET for the Microsoft .NET platform. Focuses on user interfaces, program structure, language syntax, and implementation details. This is the first course in the Visual Basic .NET curriculum and serves as the entry point for other .NET courses.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CSC 119

CSC 225 - Computer Architecture/Assembly Language Programming (4)

Introduces concepts of computer architecture, functional logic, design, and computer arithmetic. Focuses on the mechanics of information transfer and control within a computer system. Includes symbolic programming techniques, implementing high level control structures, addressing modes and their relation to arrays, subprograms, parameters, linkage to high level languages and the assembly process.

Contact Hours: 60 Contact Hours.

Recommended Preparation: completed or currently enrolled in CSC 161

CSC 230 - C Programming: Platform (3)

Prepares students to be a better programmer using the C programming language. C is a mid-level language whose economy of expression and data manipulation features allows a programmer to deal with the computer at a low level. The goal is to learn skills that are usable in many languages and understand what is happening at the machine level. The student should already understand the control structures selection, iteration, and subroutines (functions/methods).

Contact Hours: 45 Contact Hours.

Recommended Preparation: CSC 119 and completed or currently enrolled in MAT 121

CSC 233 - Object-oriented Programming (Lang) (3)

Provides students with the skills in Programming in an OOP language at an Advanced Level. It covers all syntactical components of an Object-Oriented language. Emphasizes inheritance, overloading, and polymorphism. Focuses on writing clear, properly structured, and well documented programs using Object-Oriented methodology. Large programs using multiple data structures will be written, preferably working in large groups.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CSC 119

CSC 240 - Java Programming (3)

Introduces the Java programming language and covers basic graphics, events/procedures, user interface, and libraries. Enables the student to write and execute a variety of Java programs. Incorporates Java Applets into HTML.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CSC 119

CSC 241 - Advanced Java Programming (3)

Continues the study of the Java programming language. Covers advanced programming topics including multi-threading, network/Internet programming, database programming, and JavaBeans. Enables the student to write advanced, large, and complex programs.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CSC 240 (p. 158)

CSC 246 - Mobile App Development: (platform) (1)

Learn how to develop mobile apps using key features and frameworks. Students will learn application design and development using a mobile development platform software development kit (SDK) and corresponding programming language. Main features include: handling UI triggered and touch events, data management, simple and complex UI views, drawing, location and application settings.

Recommended Preparation: CSC 240 (p. 158)

CSC 252 - Database Program/Visual Basic (3)

Provides an in-depth look at Visual Basic as a database application development language. Topics may include ADO, multi-tier components, data bound controls, remote data access, SQL, and ASP.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CSC 220 and CIS 145.

CUA - Culinary Arts

CUA 101 - Food Safety and Sanitation (2)

Covers the basic rules of sanitation, food-borne illnesses, safe food temperatures, safe food handling techniques, the HACCP Program, pest control procedures, and local/state health rules and regulations for food service operations. At the completion of the course students take a nationally recognized test from the Education Foundation of the National Restaurant Association. If passed with a score of 75% or more, students receive a Certificate from the Education Foundation.

Contact Hours: 30 Contact Hours.

CUA 120 - Wines and Spirits (2)

Enables students to examine types of beverages and equipment including wines, beers, spirits, bar equipment and staffing. Covers profitability, marketing, federal and local laws, and service. Focuses on the history of making and processing wines, spirits and beers.

Contact Hours: 30 Contact Hours.

CUA 125 - Introduction to Foods (4)

Provides students with the fundamental principles and practices of a commercial kitchen, including safety and sanitation applications, use and care of equipment, tools, utensils and knives, recipe use and conversion, organization of work, and basic cooking methods. Focuses on the fundamental principles and production of stocks, soups, sauces, gravies, and thickening agents. Principles of cold food and non-alcoholic beverage preparation and production in a commercial kitchen. Basic cold food decorative work such as fruit and vegetable garnishes and carvings, terrines, and hors d'oeuvres. Emphasizes the effects of seasonings and cooking methods of vegetable products and basic hot food preparation. Students prepare breakfast orders

similar to those ordered in restaurants with egg cookery and dairy products emphasized.

Contact Hours: 90 Contact Hours.

CUA 129 - Center of the Plate (4)

Enables the student to plan and prepare a variety of complete meals in a commercial kitchen, focusing on center of the plate entrees including meat, poultry, seafood and vegetarian items. Meat, poultry and seafood handling and preparation, including basic forms and cuts, principles used for selecting products and appropriate cooking methods are emphasized. Vegetarian entrees are also covered, including methods of preparation and cooking of various types of potatoes, rice, legumes, pastas, casseroles and grain products with special attention give to complimentary proteins.

Prerequisite: CUA 101 and CUA 125 or HOS 121

Contact Hours: 90 Contact Hours.

CUA 145 - Introduction to Baking (4)

Provides the student with the fundamentals of baking terminology, principles of baking, and the characteristics of the functions of the main ingredients that are used in bakery production. Orients student to use commercial equipment, tools, and provides the student with the fundamentals of basic yeast-raised production and quick breads, white bread, rolls, variety grain breads, specialty breads, sweet yeast-raised products, and quick bread, fundamentals of basic cake, pie, pastry, and cookie production. Enables the student to produce a variety of cakes, pies, pastries, cookies, and assorted dessert items in a commercial kitchen.

Contact Hours: 90 Contact Hours.

Recommended Preparation: CUA 101 (p. 158) and CUA 125 (p. 158)

CUA 210 - Adv Cuisine and Garde Manger (4)

Focuses on the preparation of food display items for buffets and banquets such as fancy garnishes, fruit and vegetable carvings, canapes, party trays, etc. Includes pates, galantines, terrines, and choud froid items. Incorporates creation of food artistry show pieces meeting competition guidelines developed by the American Culinary Federation. Cover the preparation of a regional, ethnic or cultural culinary presentation based upon person research.

Prerequisite: CUA 101 and CUA 125

Contact Hours: 90 Contact Hours.

CUA 261 - Cost Controls (3)

Provides students with the opportunity to learn the types of costs usually found in the food service industry. Students will learn to apply control techniques to a variety of costs and sales. They will also learn to interpret a variety of financial reports which reflect the relationship between costs and income. Students may take the national Cost Controls test from the National Restaurant Association Education Foundation. If they pass the test with 75% or higher, they will receive a national certificate for the course.

Prerequisite: Recommended Preparation CIS 118

Contact Hours: 45 Contact Hours.

CUA 262 - Purchasing for the Hospitality Industry (3)

Emphasizes controlling costs as applied to the selection and procurement of food and supply items. Covers selection and procurement of food and supplies, supplier selection, and distribution systems including the forces affecting them. Students will take a nationally recognized test and may receive a certificate from the Educational Foundation, the educational arm of the National Restaurant Association.

Contact Hours: 45 Contact Hours.

CWB - Computer Web-Based

CWB 110 - Complete Web Authoring (3)

Explores the complete set of web authoring skills using HTML and/or other scripting languages. Includes links, backgrounds, controlling text and graphic placement, tables, image maps, frames and forms.

Contact Hours: 45 Contact Hours.

CWB 130 - Web Editing Tools: (Editor) (3)

Teaches the use of tools for Web page design and development. These tools are designed to make the creation of Web pages easy and consistent. With the use of editing tools, students will be able to build Web pages making use of forms, tables, frames, templates, Cascading Style Sheets (CSS), and layers. The student will also be able to easily publish and manage a Web site once it is created.

Contact Hours: 45 Contact Hours.

CWB 205 - Client-Side Scripting: (Software) (3)

Explores the client-side programming skills necessary to create dynamic Web content using a markup embeddable and procedural scripting language executing on the client Web browser.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CWB 110, CSC 119 and CIS 243.

CWB 208 - Web Application Development: PHP (3)

Teaches students how to work in the server-side scripting environment. Students learn the basics of application development, and general principles that apply to most development environments. Students develop applications using two different server-side application development tools; PHP Hypertext Preprocessor (PHP), and Cold Fusion. Students also learn key application standards such as source and revision control, coding standards, code optimization and data integrity.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CIS 243, CSC 119 and CWB 110

CWB 209 - Web Content Management Systems (3)

Explores the use of open source Content Management Systems to simplify the creation and maintenance of web sites.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CWB 110 and concurrent or previous CWB 208

CWB 245 - Complete Web Animation: Flash (3)

Introduces students to web interactivity, design, and coding principles.

Contact Hours: 45 Contact Hours.

Recommended Preparation: MGD 143 (p. 207)

CWB 246 - Advanced Web Animation (3)

Presents the advanced topics study of the Flash MX authoring tool, Flash's scripting language ActionScript, and the complex functions of the Macromedia Flash .swf file format. The main objective of the course is the exposure to advanced interactivity, design and coding principles.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CWB 245 (p. 159) or MGD 143 (p. 207)

CWB 280 - Internship (2)

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 business location and with the direct guidance of the instructor/ coordinator.

DAN - Dance

DAN 105 - Hip Hop Dance I (1)

Consists of basic concepts and skills of hip hop dance. Focuses on warm-up exercises, street dance footwork, ground moves, isolations and freezes. Explores hip hop dance as a high energy expression of hip hop culture. Students will learn combinations leading to hip-hop dance routines.

Contact Hours: 30 Contact Hours.

DAN 106 - Hip Hop Dance II (1)

Continues Hip Hop I with an increased knowledge of Hip Hop dance. This course consists of more advanced and challenging footwork, techniques and combinations as they apply to this genre. Emphasis will be placed on increased technical skills.

Contact Hours: 30 Contact Hours.

DAN 111 - Modern Dance I (1)

Introduces basic concepts and skills of modern dance. Focuses on technique work to increase strength, flexibility, endurance, coordination, rhythm and spatial awareness. Explores dance as a tool for communication and dance as an art form. May be repeated for no more than three credits.

Contact Hours: 30 Contact Hours.

DAN 112 - Modern Dance II (2)

Includes a more in-depth study of modern dance concepts as well as more specific techniques of modern dance choreography. Focuses on more advanced technique work and more emphasis on improvisation. May be repeated for a total of three credits.

Contact Hours: 60 Contact Hours.

Recommended Preparation: DAN 111 (p. 160)

DAN 115 - Country Swing I (1)

Includes many styles and various combinations of steps for Western dance music. Will also teach the students how to convert combinations of other dances of traditional and fad as they become popular.

Contact Hours: 30 Contact Hours.

DAN 116 - Country Swing II (1)

Teaches advanced steps and dancing skills which will enable the student to enjoy the art of dancing for leisure time activity.

Contact Hours: 30 Contact Hours.

DAN 117 - Salsa I (1)

Introduces the beginning dancer to popular Salsa steps and dance combinations. This course includes basic partnering concepts and techniques. Dancers will explore rhythm, proper body alignment and music recognition. A partner is not required for this course.

Contact Hours: 30 Contact Hours.

DAN 118 - Salsa II (1)

Continues Salsa I with an increased knowledge of Salsa dance. This course focuses on Salsa dancing in groups of couples with frequent partner exchanges. Dancers learn a more in-depth study of Salsa dance concepts and techniques. A partner is not required for this course.

Prerequisite: DAN 117

Contact Hours: 30 Contact Hours.

DAN 119 - Salsa III (1)

Continues Salsa II with an increased knowledge of Salsa dance. This course focuses on more advanced dance technique as well as performance qualities and creative expression. Students engage in more challenging foot work with frequent partner exchanges. A partner is not required for this course.

Prerequisite: DAN 118

Contact Hours: 30 Contact Hours.

DAN 121 - Jazz I (1)

Introduces the basic techniques and vocabulary of jazz dance and the basic elements of dance. Focuses on movement oriented dance, comprised of warm-up exercises, center combinations, traveling combinations and cool down. May be repeated for a maximum of three credits.

Contact Hours: 30 Contact Hours.

DAN 122 - Jazz II (2)

Continues Jazz I with an increased knowledge of jazz dance. Enables the student to work at an intermediate level with a basic understanding of body alignment, balance and musicality. May be repeated for a maximum of three credits.

Prerequisite: DAN 121

Contact Hours: 60 Contact Hours.

DAN 125 - History of Dance I (3)

Introduces the history of dance as a theatre or performing art. Examines dance from Classical Greece through the Renaissance, including court and classical ballet to modern dance with African and Caribbean influences.

Prerequisite: Co-Req or Prereq: CCR 092, CCR 093, or CCR 094 OR Prereq: ENG 060, ENG 090, or ENG 121. CCR courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

This is not a physical activity class. It is considered an arts and humanities elective.

DAN 129 - Introduction to Dance (1)

Introduces the art of dance and movement expression from a variety of viewpoints: historical, cultural, aesthetic, critical and

creative. Examines the art and craft of dance as an expression of culture and community while exploring personal expression, imagery, dance techniques and performance qualities.

Contact Hours: 30 Contact Hours.

DAN 130 - Dance Sampler (1)

Introduces the beginning dancer to popular dances through a social dance sampler in Salsa, Swing, and Country Western Dance technique, footwork, body posturing, rhythms, and dance floor etiquette. Examines a variety of dances such as Salsa's Mambo, Cha-Cha, and Rumba; Swing's Lindy Hop (jitterbug); and Country Western's Two Step, Cowboy Waltz, Cotton-Eyed Joe and various Country Western line dances.

Contact Hours: 30 Contact Hours.

DAN 131 - Ballet I (1)

Introduces the basic techniques of ballet, which are built upon knowledge of ballet terminology, fundamental exercises, and the basic elements of dance. Focuses on movement-oriented dance, comprised of stretching, barre warm-up exercises, simple terre à terre and jumping steps, and basic extended positions. May be repeated for a maximum of three credits.

Contact Hours: 30 Contact Hours.

DAN 132 - Ballet II (2)

Continues Ballet I and emphasizes ballet terminology, fundamental exercises and the basic elements of dance. Focuses on an intermediate level within the basic structure of the ballet class. May be repeated for a maximum of three credits.

Contact Hours: 60 Contact Hours.

DAN 141 - Ballroom Dance (1)

Introduces the basic terminology, techniques and routines of several dances from a specific country or region. Focuses on the music, costumes and customs related to the dances they study. Partners are not required. May be repeated for a maximum of three credits.

Contact Hours: 30 Contact Hours.

DAN 142 - Ballroom Dance II (1)

Continues Dance 141 with focus on regional dances, customs and rhythms. Partners are not required. May be repeated for a maximum of three credits.

Contact Hours: 30 Contact Hours.

DAN 143 - Tap I (1)

Introduces basic tap dance movements and techniques. The shuffle, ball change, brush, flap heel drop, stomp, and stamp step are covered.

Contact Hours: 30 Contact Hours.

DEA - Dental Assisting

DEA 102 - Principles of Clinical Practice (3)

Includes techniques used in four handed dentistry, instrument identification and armamentarium for tray set-ups. Covers sterilization and aseptic procedures.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: DEA 120 and DEA 121

DEA 104 - Specialties in Dentistry (2)

Focuses on armamentarium of specific tray set-ups for periodontics, endodontics, and fixed and removable prosthodontics. Examines pediatric dentistry, oral surgery, and implants. Includes diagnosis, treatment, and the dental assistant's role in each specialty.

Prerequisite: DEA 102, DEA 120, and DEA 121

Contact Hours: 30 Contact Hours.

DEA 111 - Dental Office Management (2)

Includes office management and clerical practices, scheduling appointments, completing daily records, insurance and tax forms, bookkeeping and recall systems, and ordering supplies.

Contact Hours: 30 Contact Hours.

Recommended Preparation: DEA 120, DEA 121

DEA 120 - Introduction to Dental Practices (1)

Includes roles and responsibilities of the dental health team; educational background for the various specialties including general practitioner, hygienist, dental assistant; history, legal implications, ethical responsibilities and the role of professional organizations.

Contact Hours: 15 Contact Hours.

DEA 121 - Dental Science I (3)

Includes fundamentals of the oral structures as they apply oral histology, embryology, morphology, pathology and dental anatomy.

Contact Hours: 45 Contact Hours.

Recommended Preparation: DEA 120.

DEA 122 - Dental Science II (3)

Includes survey of human anatomy and physiology, the structure of the head and neck as applied to dental assisting, the function of the maxilla and mandible, processes, foramen, sutures, and major nerve and blood supply.

Contact Hours: 45 Contact Hours.

Recommended Preparation: DEA 120

DEA 123 - Dental Materials I (3)

Includes fundamentals of dental materials as they apply to clinical and laboratory applications.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: DEA 120 and DEA 121.

DEA 124 - Dental Materials II (3)

Includes type, compositions, and uses of elastomeric impression materials and the fabrication of custom impression trays and temporary crowns.

Prerequisite: DEA 120, DEA 121, and DEA 123

Contact Hours: 67.5 Contact Hours.

DEA 125 - Dental Radiography (3)

Focuses on the science of radiography and the application of radiographic techniques, and aseptic techniques. Students must be a minimum of 18 years of age.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: DEA 120 and DEA 121.

DEA 126 - Infection Control (3)

Includes basic information concerning infection and disease transmission in the dental office. Emphasizes knowledge of micro-organisms, with an emphasis on aseptic techniques, sterilization, and hazardous communication management.

Contact Hours: 45 Contact Hours.

Recommended Preparation: DEA 120 and DEA 121.

DEA 131 - Dental Radiography II (3)

Includes theory and techniques of exposing intra-oral and extra-oral radiographs on adults, children, edentulous, and special needs patients. Covers dental anatomy radiographic interpretation. Enables the student to expose radiographs on the x-ray mannequin and patients. Students must be a minimum of 18 years of age.

Prerequisite: DEA 120, DEA 121, and DEA 125

Contact Hours: 67.5 Contact Hours.

DEA 132 - Medical Emergencies in the Dental office (2)

Includes techniques for taking and reading vital signs. Emphasizes recognition, prevention and management of medical emergency situations in the dental office. Covers completing and updating patient health history. Addresses pharmacology.

Contact Hours: 30 Contact Hours.

Recommended Preparation: DEA 120 and DEA 121

DEA 134 - Prevention and Nutrition in Dentistry (3)

Emphasizes techniques in preventive dentistry to include application of fluoride, pit and fissure sealants, oral home care instruction, diet counseling and nutrition as it applies to dental health. Covers techniques for coronal polishing, extra-oral and intra-oral examination, and dental charting.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: DEA 102, DEA 120, DEA 121, DEA 126, DEA 132 and DEA 181

DEA 181 - Clinical Internship I (1)

Includes the opportunity for clinical application of dental assisting techniques in a dental office or clinical setting as part of the American Dental Association's requirement of 300 clinical internship hours.

Contact Hours: 45 Contact Hours.

DEA 182 - Clinical Internship II and Seminar (6)

Focuses on clinical practice in private or public dental offices or clinics with clinical work experience in both general dentistry and specialty fields on a rotating basis.

Prerequisite: DEA 102, DEA 104, DEA 111, DEA 120, DEA 121, DEA 122, DEA 123, DEA 124, DEA 125, DEA 126, DEA 131, DEA 132, DEA 134, DEA 181

Contact Hours: 270 Contact Hours PER CREDIT.

Recommended Preparation: DEA 183 (p. 162) and a Gen Ed course

DEA 183 - Clinical Internship III (2)

Explores specific job responsibilities pertinent to the dental health team. Enables the dental assisting student to achieve skills by clinical practice. Includes hours of successful completion

to satisfy the 300 clock hours required by the ADA Commission on Dental Accreditation.

Prerequisite: DEA 102, DEA 120, DEA 121, DEA 123, DEA 125, DEA 126, DEA 134.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: DEA 104 (p. 161), DEA 111 (p. 161), DEA 122 (p. 161), DEA 124 (p. 161), DEA 131 (p. 162), DEA 132 (p. 162), and DEA 181 (p. 162).

DEA 200 - Introduction to Expanded Functions (4)

Emphasizes techniques and concepts of expanded functions in dental assisting, including team management, placement and finishing of dental restorative materials, and adjunct procedures necessary to restorative dentistry.

Prerequisite: Graduate of an ADA accredited program, Certified Dental Assistant, or 2 years of documented experience.

Contact Hours: 90 Contact Hours.

DEA 208 - Nitrous Oxide and Oxygen Administration (1)

Prepares the dental professional in the administration of nitrous oxide/oxygen (N₂O/O₂) sedation in the dental setting. Includes the history, pharmacology, equipment and techniques related to nitrous oxide/oxygen administration. Students administer (N₂O/O₂) sedation under the direct supervision of an approved licensed dentist for a minimum of four (4) hours. Meets the requirement for State of Colorado Board of Dental Examiners approval to administer and monitor nitrous oxide and oxygen sedation.

Prerequisite: CPR professional rescuer certification and one-year work experience

Contact Hours: 15 Contact Hours.

See the list of Specialized Dental Assisting Courses on the first page of this Course Offerings section.

DPM - Diesel Power Mechanics**DPM 100 - Introduction to Diesel Mechanics (2)**

Focuses on the student identifying and describing the many different types of diesel powered vehicles. Emphasis is placed on being able to research information in maintenance manuals and parts manuals along with demonstration of their abilities in properly identifying and selecting mechanical fasteners for a particular application. Specific coverage of precision fasteners, fuels and fluids as they relate to the diesel industry.

Prerequisite: ASE 101, ASE 120 and ASE 123. These courses can be taken concurrently.

Contact Hours: 45 Contact Hours.

Recommended preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204).

DPM 103 - Diesel Engines I (4)

Covers the theory and operation of diesel engines with emphasis on cylinder heads and valve trains diagnosis and repair. Also introduces the cooling system's importance with diagnosis and repair. Enables students to diagnose, test and repair cylinder heads and cooling systems on diesel engines.

Prerequisite: DPM 100

Contact Hours: 90 Contact Hours.

DPM 203 - Diesel Engines II (4)

Covers the theory of operation and repair of diesel engines with emphasis on the cylinder block in big bore engines. Enables students to disassemble, inspect and reassemble engines.

Prerequisite: DPM 103

Contact Hours: 90 Contact Hours.

ECE - Early Childhood Education

Students enrolling in ECE 102, ECE 112, ECE 124 , ECE 180, ECE 188, ECE 280 and ECE 288 must pass a criminal background check before they are allowed to start their practicum hours with children. Contact your home campus ECE Program Director or the FRCC – ECE Online Lead for information on how to complete the background check process.

ECE 101 - Introduction to Early Childhood Education (3)

Provides an introduction to early childhood education. 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. Focuses on ages from birth through age 8.

Prerequisite: CCR 092, CCR 093 or CCR 094 or ENG 121.

Contact Hours: 45 Contact Hours.

ECE 102 - Introduction to Early Childhood Lab Techniques (3)

Focuses on a classroom seminar and placement in a child care setting. The supervised placement provides the student with the opportunity to observe children, to practice appropriate interactions, and to develop effective guidance and management techniques. Addresses ages birth through age 8.

Prerequisite: CCR 092 or CCR 093 or CCR 094 or ENG 121. CCR courses can be taken concurrently.

Contact Hours: 75 Contact Hours (15 lecture hours, 60 lab hours).

ECE 103 - Guidance Strategies for Children (3)

Explores guidance theories, applications, goals, techniques and factors that influence expectations, classroom management issues, and prosocial skills. Addresses ages birth through age 8.

Prerequisite: CCR 092, CCR 093 or CCR 094 or ENG 121. CCR courses may be taken concurrently.

Contact Hours: 45 Contact Hours.

ECE 108 - The Assessment Process in Early Childhood Education (1)

Focuses on exposing students to a wide variety of screening tools and evaluations appropriate for children birth to 8 years of age. Enables students to gain beginning knowledge in the selection of developmental screening tools and evaluations important to the IFSP/IEP.

Contact Hours: 15 Contact Hours.

ECE 111 - Infant and Toddler theory and Practice (3)

Presents an overview of theories, applications (including observations) and issues pertinent to infant and toddler development in-group and/or family settings. Includes state requirements for licensing, health, safety and nutrition issues. Note: Ages addressed are prenatal through age 2.

Contact Hours: 45 Contact Hours.

ECE 112 - Introduction to Infant/Toddler/Lab Tech (3)

Includes a classroom seminar and placement in an infant and/or toddler setting. The supervised placement provides the student with the opportunity to observe, to practice appropriate interactions and to develop effective guidance and nurturing techniques with infants and/or toddlers. Addresses ages prenatal through age 2.

Prerequisite: ECE 111 Corequisite: ECE 111

Contact Hours: 75 Contact Hours (15 lecture hours, 60 lab hours).

ECE 120 - Introduction to Early Intervention for Infants and Toddlers (4)

Provides an introduction to early intervention (EI) for infants and toddlers and includes four key topics: orientation to early intervention, fundamentals of the Individualized Family Service Plan (IFSP) process, early intervention teamwork, and working with families of infants and toddlers.

Contact Hours: 60 Contact Hours.

ECE 121 - Promoting Infant and Toddler Development in Natural Environments (3)

Emphasizes issues and strategies when working with infants and toddlers and their families in group and/or family settings. The course includes three key topics: supporting infants' and toddlers' social and emotional development, instructional strategies used in early intervention programs to support learning, and early oral language development.

Contact Hours: 45 Contact Hours.

ECE 122 - Interventions for Infants' and Toddlers' Health, Communication, and Behavioral Needs (3)

Focuses on supporting infants and toddlers with health, communication, and behavioral needs. This course includes three key topics: the health services related to the early intervention programs; communication challenges and their impact on other areas of development; and supporting infants and toddlers with behavior challenges and their families.

Contact Hours: 45 Contact Hours.

ECE 123 - Critical Topics in Early Intervention: Autism, Assistive Technology, and Transition (3)

Introduces three critical topics: Autism Spectrum Disorders (ASD) in early intervention, instructional and assistive technology in early intervention, and transition of infants and toddlers at age three.

Contact Hours: 45 Contact Hours.

ECE 124 - Professional Growth and Development: Theory and Practice (with Lab) (4)

Focuses on theoretical and practical aspects of personal and professional growth and development of the Developmental Intervention (DI) assistant needed to work in early intervention settings. The course includes interpersonal skills to work in teams and support personal growth, as well as field experience in early intervention settings with infants and toddlers with disabilities. Students work under the supervision of experienced and licensed early intervention providers with direct guidance of the instructor.

Contact Hours: 75 Contact Hours (45 lecture hours, 15 lab hours).

ECE 125 - Science, Math and the Young Child (3)

Examines theories of cognitive development as a framework for conceptualizing the way young children acquire scientific and mathematical skills, concepts, and abilities. Enables students to research and develop appropriate individual and group scientific and mathematical activities for young children.

Contact Hours: 45 Contact Hours.

ECE 126 - ART and the Young Child (2)

Prepares students to plan and implement a comprehensive and developmentally appropriate art program for young children. Investigates the development of self-taught art techniques in young children.

Contact Hours: 30 Contact Hours.

ECE 127 - Music/Movement for the Young Child (1)

Focuses on the purposes of incorporating music and movement into the early childhood curriculum. Through active participation with hands-on experiences, students work with the concepts of age and developmental appropriateness when designing fun activities with both subjects.

Contact Hours: 15 Contact Hours.

ECE 145 - Creative Materials (1)

Introduces and develops creative ways to prepare inexpensive materials to enhance the learning of young children. This course includes designing practical uses for recycled and found materials to meet the developmental needs of young children, leading activities with groups of young children, and presenting activities and created materials to colleagues.

Contact Hours: 15 Contact Hours.

ECE 151 - Early Childhood Education Leadership Development (1)

Introduces concepts of leadership as an early childhood professional and provides opportunities to develop leadership skills. This course includes qualities, characteristics, and responsibilities of successful leaders, ethics, advocacy, collaboration and professional growth.

Contact Hours: 15 Contact Hours.

ECE 155 - Family and Parenting Issues (1)

Explores the types of family organizations, functional roles of family members, different parenting styles and other issues impacting children's development that families and parents are experiencing in today's society.

Contact Hours: 15 Contact Hours.

ECE 157 - Family Dynamics (1)

Enables the student to understand and develop partnerships with families who have children with special needs. Introduces the concept of family systems, the impact of children with special needs upon the family system, and the role of the paraeducator in collaborating with families of diverse cultural, socio-economic, and ethnic backgrounds.

Contact Hours: 15 Contact Hours.

ECE 160 - Behavior Management Techniques in Early Childhood Education (1)

Provides information pertaining to behavior management techniques to promote a positive learning environment for children in inclusive settings. Addresses various principles and

techniques concerning individual behavior needs and classroom management.

Contact Hours: 15 Contact Hours.

ECE 161 - the Team Process (1)

Enables the student to work effectively in team situations. Covers the interpersonal aspects of working in a team as well as specific skills in establishing good working relationships among personnel with differing roles and responsibilities.

Contact Hours: 15 Contact Hours.

ECE 175 - Special Topics ()

Provides students with a means to pursue in-depth exploration of special topics of interest.

ECE 179 - Seminar (1-2)

Provides students with an opportunity to examine aspects of early childhood education in detail.

Prerequisite: ECE 102 Corequisite: ECE 180

Contact Hours: 15 Contact Hours PER CREDIT.

ECE 180 - Internship (3)

Focuses on work experience in an early childhood setting.

Prerequisite: ECE 102 Corequisite: ECE 179

Contact Hours: 90 Contact Hours.

ECE 188 - Practicum (4*)

Provides students with field experience in early childhood programs.

Contact Hours: 30 Contact Hours PER CREDIT.

ECE 195 - School Age Child in Child Care (2)

Explores important issues of before and after school care (school holiday and summer day camp), emphasizing child development, health, safety, and appropriate activities for school-age children in the child care setting.

Contact Hours: 30 Contact Hours.

ECE 205 - Nutrition, Health and Safety (3)

Focuses on nutrition, health and safety 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 ages from prenatal through age 8.

Contact Hours: 45 Contact Hours.

ECE 209 - Observing Young Children (1)

Examines the current research on the continuous practice of observing children. Incorporates practice with a variety of assessment instruments currently utilized in Colorado ECE programs.

Contact Hours: 15 Contact Hours.

ECE 220 - Curriculum Development: Methods and Techniques (3)

Provides an overview of early childhood curriculum development. Includes processes for planning and implementing developmentally appropriate environments, materials and experiences, and quality in early childhood programs. Note: Ages addressed are birth through age 8.

Prerequisite: ECE 101 or ECE 238.

Contact Hours: 45 Contact Hours.

ECE 225 - Language and Cognition for the Young Child (3)

Examines theories of cognitive and language development as a framework for conceptualizing the way children acquire thinking skills. Includes observing, planning, facilitating, creative representation, and evaluating strategies within the context of play. Focuses on language, science, math, problem solving and logical thinking. Addresses ages birth through age 8.

Contact Hours: 45 Contact Hours.

ECE 226 - Creativity and the Young Child (3)

Provides an emphasis on encouraging and supporting creative self-expression and problem solving skills in children. Explores creative learning theories and research. Focuses on developmentally appropriate curriculum strategies in all developmental domains. Addresses ages birth through age 8.

Contact Hours: 45 Contact Hours.

ECE 228 - Language and Literacy (3)

Presents strategies for optimum language development, literacy, social and emotional development. Supports children's language and literacy in home, classroom and community settings. Provides appropriate teacher/child verbal interactions, classroom environments and activities. Addresses ages birth through age 8.

Contact Hours: 45 Contact Hours.

ECE 236 - Child Growth/Development Laboratory (1)

Covers the growth and development of the child from conception through the elementary school years. Emphasizes physical, cognitive, language, social and emotional domains and the concept of the whole child and how adults can provide a supportive environment. Addresses ages from prenatal through age 12.

Prerequisite: Completion of ECE 238. ECE 238 may be taken concurrently.

Contact Hours: 30 Contact Hours.

ECE 237 - 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 and theorists underlying quality interactions and patterns of social and emotional progression.

Contact Hours: 45 Contact Hours.

ECE 238 - Child Growth and Development (3)

Covers the growth and development of the child from conception through the elementary school years. Emphasizes physical, cognitive, language, social and emotional domains and the concept of the whole child and how adults can provide a supportive environment. Addresses ages from prenatal through age 12.

Prerequisite: CCR 092, CCR 093 or CCR 094 or ENG 121. CCR courses may be taken concurrently.

Contact Hours: 45 Contact Hours.

ECE 240 - Administration of Early Childhood Care and Education Programs (3)

Examines Colorado's minimal licensing requirements, as well as optimal standards pertaining to the operation of programs for young children. Focuses on the director's administrative skills and role as a community advocate for young children. Addresses ages from birth through age 12.

Prerequisite: ECE 220 or ECE 238.

Contact Hours: 45 Contact Hours.

ECE 241 - Administration: Human Relations for Early Childhood Education (3)

Focuses on the human relations component of an early childhood professional's responsibilities. Includes director-staff relationships, staff development, leadership strategies, parent-professional partnerships, and community interaction.

Contact Hours: 45 Contact Hours.

ECE 256 - Working with Parents and Families (3)

Examines attitudes and family values systems and how they affect parent-professional partnerships. Addresses communication, problem-solving and conflict resolution strategies. Plans effective activities and programs for parent involvement. Addresses ages birth through 8.

Contact Hours: 45.

ECE 260 - Exceptional Child (3)

Presents an overview of typical and atypical developmental progression. Includes planning techniques, learning strategies, legal requirements and accommodations and adaptations that are necessary in order to create an inclusive classroom environment for a child with a wide range of exceptionalities. Focuses on ages birth through age 8.

Prerequisite: ECE 238 or PSY 238

Contact Hours: 45 Contact Hours.

ECE 266 - Multicultural Curriculum (3)

Explores views of different ethnic groups regarding early childhood, child-rearing practices and the child's role in society. Focuses on developing a multicultural curriculum to incorporate individually based developmental and culturally appropriate practices. Provides opportunities to design multicultural materials to address cognition, socialization, language and small and large motor development.

Contact Hours: 45 Contact Hours.

ECE 279 - Seminar (1-2)

Provides students with an opportunity to examine aspects of early childhood education in detail.

Prerequisite: ECE 102 and ECE 179. Corequisite: ECE 280 or ECE 287.

Contact Hours: 15-30 Contact Hours.

ECE 280 - Internship (3)

Focuses on work experience in a licensed early childhood care and education program.

Prerequisite: ECE 102, ECE 179 and ECE 180. Corequisite: ECE 279

Contact Hours: 90 Contact Hours.

ECE 288 - Practicum: Early childhood Education (4)

Provides students with advanced field experience opportunities in early childhood education programs.

Contact Hours: 30 contact hours per credit.

ECO - Economics**ECO 101 - Economics of Social Issues (3)**

Examines the major socio-economic issues of the past century. Covers poverty and growth, education, health care, pollution and discrimination.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

ECO 201 - Principles of Macroeconomics (3)

Focuses on the study of the American economy, stressing the interrelationships among the household, business, and government sectors. Explores saving and investment decisions, unemployment, inflation, national income accounting, taxing and spending policies, the limits of the market and government, public choice theory, the Federal Reserve System, money and banking, and international trade.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Recommended Preparation: ECO 202 and MAT 050.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

ECO 202 - Principles of Microeconomics (3)

Focuses on the consumer, the firm, the nature of cost, and how these relate to the economy as a whole. Analyzes economic models of the consumer, perfect competition, monopoly, oligopoly and monopolistic competition. Explores economic issues including market power, population growth, positive and negative externalities, income distribution, poverty and welfare, discrimination, and international economic inter-dependence.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Recommended Preparation: MAT 050.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

ECO 211 - Gender in the Economy (3)

The course introduces students to how gender factors into the economy. It includes the concepts of femininity and masculinity and how these concepts play a role in consumption, labor and marriage markets, poverty and inequality, and globalization.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

ECO 235 - Issues in International Economics (3)

This course studies international economic interdependence. It analyzes the foundations of trade theory, international trade

organizations and trade policies, regional trade arrangements, international financial institutions, and e-trade.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ECO 201 and ECO 202.

ECO 245 - Issues in Environmental Economics (3)

Introduces students to contemporary environmental issues and policies meant to reduce environmental degradation. Includes market failures, analytical tools, government pollution reduction policies for air, water and natural environments and their effectiveness.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Recommended Preparation: ECO 202.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

EDU - Education

Students enrolling in EDU 288 must pass a criminal background check before they are allowed to start their site hours. Contact your home campus EDU Lead Faculty or the FRCC – EDU Online Lead for information on how to complete the background check process.

EDU 005 - Test Prep for Paraeducators Workkeys (1)

Reviews the format and content for the ACT Paraeducator WorkKeys assessment. Student will become familiar with the knowledge needed for the applied math and reading for information and writing assessments.

Contact Hours: 15 Contact Hours.

EDU 111 - Communications Skills with Special Populations for Paraeducation (3)

Provides knowledge in areas of effective communication skills; problem solving techniques; and analyzing self as communicator.

Contact Hours: 45 Contact Hours.

EDU 112 - Health and Safety Issues in Schools for Paraeducators (1)

Provides students with the knowledge in the area of health and safety issues in schools; basic first aid and CPR procedures; and the feeding and positioning of physically challenged students.

Contact Hours: 15 Contact Hours.

EDU 114 - Students Behavior Management for Paraeducators (3)

Provides students knowledge in the areas of behavior modification; teaching appropriate behaviors; contingency contacts; observing and recording behavior; lunchroom supervision; and playground supervision.

Contact Hours: 45 Contact Hours.

EDU 131 - Introduction to Adult Education (3)

Introduces the student to the basic concepts in the instruction of adults. Emphasis will be placed on understanding the adult learner and how their individual backgrounds and experiences can affect the learning process. Additionally, the course will cover applicable federal and state legislation that affects adult learning programs and will offer information on additional resources and associations in the field of adult education.

Contact Hours: 45 Contact Hours.

EDU 132 - Planning, Organizing and Delivering Adult Education Instruction (3)

Covers the basics of planning an adult education program, organizing instruction within the various content areas, and delivering the material in a variety of ways, both in groups and individualized instruction. A wide variety of learning principles and theories will be addressed in ways that show their applicability to the adult learner and the student's education.

Contact Hours: 45 Contact Hours.

EDU 133 - Adult Basic Education (ABE) Adult Secondary Education (ESL) (3)

Specifically addresses the different levels within an adult education program. Each level will be addressed in terms of appropriate assessment tools and instructional techniques. Emphasis will be placed on teaching ways that the adult education instructor can encourage the development of cognitive skills at each level, as a springboard to the next higher level.

Contact Hours: 45 Contact Hours.

EDU 134 - Teaching English as a Second Language to Adults (3)

Introduces the development and implementation of a program to teach English to adults whose first language is not English. Topics will range widely from assessment and placement to the theories behind language acquisition. Students will also cover a wide variety of methodologies, both group and individualized, that are aimed at teaching the non-English speaker the written and verbal skills necessary to successfully function in the United States.

Contact Hours: 45 Contact Hours.

EDU 135 - Family Literacy in Adult Education (3)

Introduces the students to the philosophy and theory behind family literacy, as well as give practical advice on the development and implementation of a family literacy program. The four-component model of adult education, early childhood education, parent and child together time (PACT), and parenting will be covered, both in theory and practical application.

Contact Hours: 45 Contact Hours.

EDU 141 - Basic Instructional Techniques for Paraeducators (3)

Provides students with knowledge in the areas of delivering instruction; grouping students; reading with students; modifying instructional materials; using technology; and utilizing adaptive equipment.

Contact Hours: 45 Contact Hours.

EDU 194 - Service Learning (3)

Allows the student to provide a service to the community utilizing knowledge and skills acquired from college coursework. Aims to focus on the philosophical, educational and ethical aspects of community work. Its purpose is to empower students and citizens with practical, methods for advocacy.

Contact Hours: 45 Contact Hours.

EDU 220 - Exploration of Teaching (2)

Gives students a study of the broad overview of topics related to the teaching profession, grades K-12. Provides a hands-on,

relevant exploration to help each student personally consider a career in education.

Contact Hours: 30 Contact Hours.

EDU 221 - Intro to Education (3)

Focuses on the historical, social, political, philosophical, cultural and economic forces that shape the United States public school system. Includes current issues of educational reform, technology as it relates to education and considerations related to becoming a teacher in the state of Colorado.

Prerequisite: College level English proficiency or CCR 093 or higher or COM 115.

Contact Hours: 45 Contact Hours.

EDU 222 - Effective Teaching (1)

Focuses on strategies for becoming an effective teacher. Topics included are: course goals and objectives, the first day, planning a lesson, higher levels of thought, test design and grading, assessment, and teaching and learning styles.

Contact Hours: 15 Contact Hours.

EDU 231 - Intro to Bilingual Education (4)

Focuses on bilingual and multicultural education with emphasis on the linguistically and culturally diverse learner. Covers historical perspectives, philosophical frameworks, legal implications, subject matter methodologies and current issues, which impact bilingual educational programs.

Prerequisite: EDU 221

Contact Hours: 60 Contact Hours.

EDU 232 - Literacy in the Multicultural/Multilingual Classroom (3)

Introduces students to the theories, methods and techniques for teaching reading and languages to the children from diverse cultural and linguistic backgrounds. Includes field experience applying coursework with children.

Contact Hours: 45 Contact Hours.

EDU 233 - English Language Learning (K - 6) (3)

Prepares teachers who work with limited English proficient students to learn strategies to develop English language learners' (ELLs') social and academic English and supports their transition to US culture and schools. This course is appropriate in a variety of program models: mainstream classrooms, self-contained ESL classrooms, and bilingual programs and may be adapted for use with pre-service teachers.

Prerequisite: EDU 221

Contact Hours: 45 Contact Hours.

EDU 242 - Expressive ARTs in the Elementary Classroom (3)

Explores the integration of visual arts, music, and physical education/movement into the self-contained elementary classroom curriculum based upon the theory of multiple intelligences. Familiarizes the student with the Colorado Model Content Standards for each area, basic curriculum development, and the opportunities to practice their skills with students through field experiences.

Prerequisite: EDU 221

Contact Hours: 45 Contact Hours.

EDU 250 - CTE in Colorado (1)

Explores common elements of American Community College 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, national and state regulatory agencies, the CCCS program approval process, enrollment management and advising strategies, relevant local and national issues, and quality assurance principles.

Contact Hours: 15 Contact Hours.

EDU 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.

Contact Hours: 45 Contact Hours.

EDU 260 - Adult Learning and Teaching (3)

Introduces the basic instructional theory focusing on the adult learner. Includes developing a syllabus, learning goals and outcomes, and lesson plans. Emphasizes teaching to a diverse participant body, classroom management, learning theory, learning styles, teaching styles, and using technology in the classroom.

Contact Hours: 45 Contact Hours.

EDU 261 - Teaching, Learning and Technology (3)

Prepares students to integrate technology into their teaching curriculum. Enables the student to design educational and training materials incorporating instructional technology. Explores a variety of technologies, including the computer, Internet, multimedia, graphics, audio, and text with an emphasis on increasing learning through their use. Examines combining technology with a variety of instructional methodologies.

Prerequisite: EDU 221 or EDU 260

Contact Hours: 45 Contact Hours.

EDU 266 - Advanced College Teaching Methods (1)

Explores current adult learning theory, and relates this theory to the practice of teaching. It also covers a variety of factors that influence teaching and learning, including social and individual psychological aspects of adult learning, patterns of participation and motivation, the role of instructional technology, handling challenging classroom behaviors, and assessment and evaluation strategies. The main point raised and discussed throughout the course is that effective teaching requires that instructors utilize a range of teaching and assessment approaches and methods in order to enhance learning.

Contact Hours: 15 Contact Hours.

EDU 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.

Contact Hours: 30 Contact Hours PER CREDIT.

EDU 289 - Capstone (1)

Focuses on a demonstrated culmination of learning within a given program of study.

Prerequisite: TEL 100, TEL 102, TEL 103, TEL 188, TEL 225 and (EDU 134 or TEL 245). These courses can be taken concurrently.

Contact Hours: 45 Contact Hours per credit hour.

EGG - Engineering**EGG 211 - Engineering Mechanics I - Statics (3)**

Focuses on the vector and calculus treatment of forces and force systems. Covers concurrent and noncurrent force systems. Includes calculating moments of friction, trusses, centroids and moments of inertia.

Contact Hours: 45 Contact Hours.

Recommended Preparation: PHY 211.

EGG 212 - Engineering Mechanics II - Dynamics (3)

Focuses on vector and calculus treatment of the dynamics of particles and rigid bodies using Newton's Laws. Includes work-energy impulse momentum, and free and forced oscillations.

Contact Hours: 45 Contact Hours.

Recommended Preparation: PHY 211.

EGT - Engineering Graphics Technology**EGT 101 - Technical Drafting I (3)**

Introduces the student to basic engineering graphics technology principles through development of basic entry-level drafting skills. Enables the student to develop skills in sketching, reading drafting scales, interpreting line types, lettering techniques, geometric construction, orthographic projection, and drawing reproduction.

Contact Hours: 67.5 Contact Hours.

EGT 143 - Civil/Survey Drafting I (3)

Focuses on Civil and Survey drafting skills necessary to produce document sets of land surveys/plats, legal descriptions, site layout, plan, profile alignments, pipe layouts, contour maps and earthwork.

Contact Hours: 67.5 Contact Hours.

EGT 201 - Engineering Materials (3)

Investigates the physical and mechanical properties of engineering materials used within industry. This course will also include the study of ferrous and nonferrous metals, polymers (plastics), woods, ceramics, composites, and other advanced materials.

Contact Hours: 45 Contact Hours.

EGT 205 - Geometric Dimension & Tolerance (3)

Focuses on interpreting and applying geometric dimensioning and tolerancing (GDT) in machining or drafting per the ASME Y14.5 specification. Demonstrate and distinguish GDT through math formulas, tolerancing systems, modifiers, symbols, datums, and tolerances of form, profile, orientation, run-out and location. Students examine and interpret the generation of a working drawing, and how they are developed as a team effort between design, drafting, manufacturing and quality control.

Prerequisite: CAD 100 , EGT 101.

Contact Hours: 67.5 Contact Hours.

EGT 243 - Civil/Survey Drafting II (3)

Focuses on advanced Civil and Survey drafting skills. Students will create computer aided drawings using traverses, legal descriptions, horizontal and vertical curves, land sections, and coordinates. Emphasizes field note interpretation.

Prerequisite: EGT 143

Contact Hours: 67.5 contact hours.

ELT - Electronics

ELT 106 - Fundamentals of DC/AC (4)

Introduces the basic skills needed for many careers in electronics and related fields. Covers the operations and applications of basic DC and AC circuits consisting of resistors, capacitors, inductors, transformers and diodes. Emphasizes the use of common test instruments in troubleshooting.

Prerequisite: MAT 108 or higher

Contact Hours: 90 Contact Hours.

ELT 107 - Fundamentals of Industrial Electronics (3)

Provides a basic knowledge of generators, motors, and the solid state devices and digital techniques used for industrial control applications.

Prerequisite: ELT 106

Contact Hours: 67.5 Contact Hours.

ELT 147 - Digital Devices I (4)

Introduces the operation and application of gates, flip-flops, counters, shift registers, encoders-decoders and LED displays. Covers binary numbers, Boolean algebra and troubleshooting.

Prerequisite: ELT 106

Contact Hours: 90 Contact Hours.

ELT 205 - Electronic Troubleshooting I (3)

Introduces basic troubleshooting techniques and skills required to analyze, troubleshoot and repair both analog and digital electronic devices.

Prerequisite: ELT 106

Contact Hours: 67.5 Contact Hours.

ELT 258 - Programmable Logic Controllers (3)

Covers the fundamentals of programmable logic controllers (PLCs) as they are applied in robotics and automation. Includes history, terminology, typical applications, hardware and software. Incorporates lab and project activities that address operating, monitoring, programming, troubleshooting and repairing PLC controlled lab trainers as well as actual industrial equipment.

Prerequisite: ELT 106 and ELT 147

Contact Hours: 67.5 Contact Hours.

EMS - Emergency Medical Services

EMS 115 - Emergency Medical Responder (3)

Provides the student with core knowledge and skills to function in the capacity of a first responder arriving at the scene of an

emergency, providing supportive care until advanced EMS help arrives. This course was formerly known as First Responder.

Contact Hours: 52.5 Contact Hours.

EMS 121 - EMT Fundamentals (3)

Introduces the Emergency Medical Technician (EMT) student to prehospital emergency care. The topics included in this course are Emergency Medical Services (EMS) systems, well-being of the EMT, communications, documentation, anatomy, airway management, and patient assessment. Student must be at least 18 years of age.

Contact Hours: 52.5 Contact Hours.

Recommended Preparation: EMS 122 (p. 169), EMS 123 (p. 169), EMS 124 (p. 169), EMS 170 (p. 170)

EMS 122 - EMT Medical Emergencies (4)

Provides the Emergency Medical Technician (EMT) student with the knowledge and skills to effectively provide emergency care and transportation to a patient experiencing a medical emergency. This course focuses on the integration of the physical exam, medical history, and pathophysiology when assessing and treating the medical patient. Student must be at least 18 years of age.

Prerequisite: EMS 121. This course can be taken concurrently.

Contact Hours: 71.25 Contact Hours.

Recommended Preparation: EMS 123 (p. 169), EMS 124 (p. 169), and EMS 170 (p. 170).

EMS 123 - EMT Trauma Emergencies (2)

Provides the Emergency Medical Technician (EMT) student with the knowledge and skills to provide appropriate emergency care and transportation of a patient who has suffered a traumatic injury. The concepts of kinematics and the biomechanics of trauma, along with pathophysiology and injury patterns will provide the student with the ability to assess and manage the trauma patient. Student must be at least 18 years of age.

Prerequisite: EMS 121. These courses can be taken concurrently.

Contact Hours: 37.5 Contact Hours.

Recommended Preparation: EMS 123 (p. 169), EMS 124 (p. 169), and EMS 170 (p. 170).

EMS 124 - EMT Special Considerations (2)

Provides the Emergency Medical Technician (EMT) student with the knowledge and skills required to modify the assessment, treatment, and transportation of special patient populations and patients in special circumstances. This course also provides an overview of incident command, mass casualty incidents, vehicle extraction, air medical support, hazardous materials, and terrorism. Student must be at least 18 years of age.

Prerequisite: EMS 122 or EMS 123. These courses can be taken concurrently.

Contact Hours: 37.5 Contact Hours.

Recommended Preparation: EMS 121 (p. 169) and EMS 170 (p. 170).

EMS 126 - EMT Refresher (2)

Provides the student with a refresher course designed to meet their certification requirements for the state of Colorado and/or a portion of the re-certification requirements for National

Registry. This course was formerly known as EMT-Basic Refresher.

Contact Hours: 37.5 Contact Hours.

Current EMT-Basic certification or National Registry less than 2 years expired or Colorado EMT/EMT-Basic Certification less than 6 months expired

EMS 130 - EMT Intravenous Therapy (2)

Focuses on cognitive and skill practice as required by Colorado Prehospital Care program for EMT/EMT Basic level IV approval. Examines criteria, procedures and techniques for IV therapy, discusses fluid and electrolyte balance and principles and treatment for shock.

Contact Hours: 41.25 Contact Hours .

National Registry EMT certification is required for enrollment with the student actively pursuing Colorado State EMT certification. Contact individual program for specific requirements.

EMS 138 - Basic Simulation Lab (3)

Integrates the knowledge and skills learned during Emergency Medical Technician (EMT) training. The participants will be exposed to the environment they will function in upon completion of their Emergency Medical Service (EMS) education. Participants will be expected to manage all aspects of an EMS call at the basic life support level from the time of dispatch to patient transfer. This will include radio, verbal and written communications; legal and ethical issues; response activities; scene assessment and management; patient interaction, assessment, and treatment; patient disposition; and preparation for the next call. Simulations are realistic representations of calls an EMT may encounter, and are conducted in "real time". There is no verbalization of any aspect of the call. Unless a safety issue exists there is no instructor interaction with the learner until the call is complete and the debriefing session occurs. The knowledge base for this course is based on current EMT certification.

Contact Hours: 67.5 Contact Hours.

EMS 140 - Advanced Simulation Lab (3)

Builds upon the knowledge gained in the basic simulation lab. The participants will be exposed to the environment they will function in upon completion of their Emergency Medical Service (EMS) education. Participants will be expected to manage all aspects of an EMS call at the advanced life support level from the time of dispatch to patient transfer. This will include radio, verbal and written communications; legal and ethical issues; response activities; scene assessment and management; patient interaction, assessment, and treatment; patient disposition; and preparation for the next call. Simulations are realistic representations of calls an advanced life support clinician may encounter, and are conducted in "real time". There is no verbalization of any aspect of the call. Unless a safety issue exists there is no instructor interaction with the learner until the call is complete and the debriefing session occurs. The knowledge base for this course is based on current EMT certification, information gained during the basic simulation lab, and knowledge and skills acquired from advanced life support classes.

Contact Hours: 67.5 Contact Hours.

EMS 150 - Pediatric Ed for Prehospital Professionals (1)

Provides the student with core knowledge and skills necessary to provide emergency care to the pediatric patient.

Contact Hours: 22.5 Contact Hours.

EMS 170 - EMT Clinical (1)

Provides the EMT student with the clinical experience required of initial and some renewal processes. This course was formerly known as EMT-Basic Clinical.

Prerequisite: EMS 121. This course can be taken concurrently.

Contact Hours: 45 Contact Hours.

Recommended Preparation: EMS 122 (p. 169), EMS 123 (p. 169), and EMS 124 (p. 169).

EMS 180 - EMT Clinical Internship (2)

Provides the Emergency Medical Technician (EMT) with a supervised clinical learning experience that goes beyond the initial EMT requirements for the State of Colorado Department of Health. Enables the student to work with an assigned preceptor for 90 hours of clinical experience to develop an understanding of the role and responsibilities of the EMT/EMT-Basic.

Contact Hours: 90 Contact Hours.

Current EMT certification and permission of instructor.

EMS 190 - EMT Professional Development (0-12)

Provides professional development continuing medical education hours for EMT-Basics/EMTs wishing to recertify at the State or National level.

Contact Hours: See current semester schedules for credit offered. Provides additional EMT topic content that applies to National Registry renewal.

EMS 214 - Basic Trauma Life Support (1)

Provides students with information and skill practice to treat trauma patients in the pre-hospital environment.

Contact Hours: 22.5 Contact Hours.

EMS 220 - Paramedic Refresher (3)

Updates the EMT-P in four specific areas of pre-hospital emergency care. Includes trauma, medical, advanced life support and elective topics focused on ancillary issues in EMS.

Contact Hours: 52.5 Contact Hours.

Currently certified as an EMT-P or National Registry less than 2 years expired or Colorado EMT-Paramedic less than 6 months expired.

ENG - English

ENG 110 - English Usage and Grammar (3)

Ensures that the student has achieved a high level of correctness, conciseness, and precision in language use and understands the principles of organizing ideas, providing adequate supporting data, and drawing logical conclusions.

Contact Hours: 45 Contact Hours.

ENG 115 - Technical English and Communication (3)

Focuses on the written and oral communication needs of students in vocational and technical fields. Enables the student to practice written, oral, reading, reasoning, and interpersonal

communication skills in order to become successful (or to remain successful) in the workplace.

Contact Hours: 45 Contact Hours.

ENG 121 - English Composition I (3)

Emphasizes the planning, writing, and revising of compositions, including the development of critical and logical thinking skills. This course includes a minimum of five compositions that stress analytical, evaluative, and persuasive/ argumentative writing. This course is one of the statewide Guaranteed Transfer courses.

Prerequisite: Appropriate writing diagnostic scores required or grade of "C" or better in CCR 092 or CCR 093.

Offered: *(GT-CO1).

Contact Hours: 45 Contact Hours.

ENG 122 - English Composition II (3)

Expands and refines the objectives of English Composition I. Emphasizes critical/logical thinking and reading, problem definition, research strategies, and writing analytical, evaluative, and/or persuasive papers that incorporate research. This course is one of the statewide Guaranteed Transfer courses.

Prerequisite: ENG 121 with a grade of "C" or better.

Offered: *(GT-CO2).

Contact Hours: 45 Contact Hours.

ENG 131 - Technical Writing I (3)

Develops skills one can apply to a variety of technical documents. Focuses on principles for organizing, writing, and revising clear, readable documents for industry, business, and government. Note: Develops computer skills to create and post HTML documents to the web.

Prerequisite: CCR 092, CCR 093 or CCR 094 with a grade of C or better or equivalent placement test score for college level writing.

Contact Hours: 45 Contact Hours.

ENG 132 - Technical Writing II (3)

Expands and refines the objectives of ENG 131, emphasizing formal presentations, both written and oral.

Prerequisite: ENG 131 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

ENG 201 - Writing for Public Discourse (3)

Provides students with skills necessary to enter into higher-level undergraduate academic discourse or professional workplace writing. ENG 201 extends students' rhetorical knowledge and develops critical reading, thinking and writing strategies in multiple specialized areas of discourse beyond what they encounter in ENG 122. In ENG 201, students deepen their rhetorical and writing skills by learning to analyze, synthesize, and summarize complex texts and incorporate this information into specific writing conventions for a defined discipline. As a more advanced composition course, ENG 201 provides interested students with the opportunity to continue their exploration of expository writing with the added benefit of learning to write for distinct audiences (format, language, level of specificity, length and documentation style). Students will also learn effective editing and revising techniques, discipline-specific writing strategies, and how to extend their mastery of rhetorical

strategies. While ENG 201 may be taught with the focus in a variety of disciplines (science writing, gender studies, literary criticism, writing in the humanities, business writing, political geography, philosophy, and so on), every discipline will allow students the opportunity to learn how to communicate with specialized audiences and adapt content to the needs of varying rhetorical situations.

Prerequisite: ENG 122

Offered: *(GT-CO3).

Contact Hours: 45 Contact Hours.

ENG 215 - Playwriting I (3)

Enables the student to learn and practice playwriting techniques, thereby improving creative writing skills. Emphasizes elements of dramatic structure, dialogue, styles, and theatrical practices.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ENG 221. This course may be taken as ENG 215 or THE 215 but not both.

ENG 221 - Creative Writing I (3)

Teaches techniques for creative writing. Explores imaginative uses of language through creative genres (fiction, poetry, literary nonfiction) with emphasis on the student's own unique style, subject matter and needs.

Contact Hours: 45 Contact Hours.

ENG 222 - Creative Writing II (3)

Provides continued development of written expression in such forms as poetry, fiction, and/or nonfiction writing.

Contact Hours: 45 Contact Hours.

ENG 221 recommended.

ENG 226 - Fiction Writing (3)

Teaches techniques for creating fiction, including the study and appreciation of the language and forms of the short story.

Contact Hours: 45 Contact Hours.

ENG 227 - Poetry Writing (3)

Teaches techniques for creating poems, including study of figurative language, forms, and sound patterns of poetry.

Contact Hours: 45 Contact Hours.

ENG 228 - Writing for the Graphic Novel (3)

Introduces story analysis and writing concepts used in writing for the graphic novel. Students explore the graphic novel as a vehicle for a unique, personal venue for written expression. Students explore the history and universal themes of the graphic novel as well as examine the principles of composition, different writing styles and processes used in the development of the graphic novel. The application of writing skills, script development and revision processes necessary for the creation of an individual graphic work and thorough examination of course materials in terms of writing style, process considerations and written themes are the primary focus. Students create outlines, scripts and a final written work for a graphic novel, focusing on unity of style and techniques for authoring appropriate to story lines.

Contact Hours: 45 Contact Hours.

ENG 230 - Creative Nonfiction (3)

Teaches students to incorporate literary techniques into factual writing. Enables the student to survey a wide range of readings and analyze form and content. Includes critical review, biographical profiles, travel writing, and memoirs. Provides the opportunity for students to write and review their own nonfiction in a supportive, constructive setting.

Contact Hours: 45 Contact Hours.

ENG 236 - Writing the Film I (3)

Guides students in the development of a treatment, outline, and opening act for a feature film script, focusing on specific script format, ideation, film genre conceptualization, plot structure and character development. Students complete a 30-minute spec script, as well as a full treatment and outline for a feature film.

Contact Hours: 45 Contact Hours.

ENG 237 - Writing the Film II (3)

Designed to advance students into the craft of screenwriting through the development of advanced skills in formatting techniques, structure, and modern film language. Students will gain insight into subtext, theme and motif. This course will utilize workshops to write part of a feature-length of screenplay.

Contact Hours: 45 Contact Hours.

ENP - Entrepreneurship**ENP 105 - Introduction to Entrepreneurship (3)**

The student will evaluate the business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. The student will understand the role of entrepreneurial businesses in the United States and the impact on our national and global economy.

Contact Hours: 45 Contact Hours.

ENP 106 - E-Ship Opportunity Feasibility Study (3)

Students will assess the viability of a new venture business idea to determine if the concept is feasible for business start up and long term growth based on strengths and skills, personal, professional and financial goals. The student will identify and analyze through basic research the present climate for their business idea by completing an industry, target market and competitive analysis. The student will assess the financial needs for startup as well as their own skills, strengths and talents to launch a successful business idea.

Contact Hours: 45 Contact Hours.

ENP 205 - Marketing for the Entrepreneur (3)

In the course, the student will gain insights essential for marketing their entrepreneurial venture utilizing innovative and financially responsible marketing strategies. Students will develop an understanding of traditional and non-traditional entrepreneurial marketing strategies. Prepare marketing strategies with associated tactics to launch and sustain an entrepreneurial venture.

Contact Hours: 45 Contact Hours.

ENP 206 - Entrepreneurship Legal Issues (3)

The student will explore legal issues related to business entities including sole proprietorship, general partnerships, limited partnerships, and corporations. Students will review contract

law, articles of incorporations and the filing process, employment law (including FEPA, ADA, FMLA), personnel policies and procedures, the hiring process, job descriptions, disciplinary actions and business insurance.

Contact Hours: 45 Contact Hours.

ENP 207 - Entrepreneurship Financial Topics (3)

This is a comprehensive course covering financial situations for business. Financial topics will include employee benefits, retirement planning, budgeting, creation of financial statements, and learning how to work with an accounting professional. Other topics will include tax, sales and use tax, payroll tax and unemployment tax.

Contact Hours: 45 Contact Hours.

ENV - Environmental Sciences**ENV 101 - Introduction to Environmental Science (4)**

Provides an introduction to the basic concepts of ecology and the relationship between environmental problems and biological systems. Includes interdisciplinary discussions on biology, chemistry, geology, energy, natural resources, pollution, and environmental protection. Using a holistic approach, students will study how the foundations of natural sciences interconnect with the environment. This course includes laboratory experience.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours.

ENY - Energy**ENY 101 - Introduction to Energy Technologies (3)**

Introduces the energy technologies in use today and those that are in the research stage as possible alternatives. Presents technologies including active solar heating, passive solar heating, wind energy systems, biomass, photovoltaics, co-generation, low and high head hydro, hydrogen, geothermal, power towers and energy storage systems.

Contact Hours: 67.5 Contact Hours.

ENY 122 - Wind Energy and Photovoltaics (3)

Prepares students for entry level, technical positions in the growing fields of wind and solar photovoltaic systems. Introduces various aspects of wind and solar photo voltaic (PV) power systems. Covers the current state of wind and PV systems in the U.S. and the world briefly. Covers the basic elements of wind power systems including wind energy mapping, site selection, wind turbine components, and power vs. speed calculations including a brief overview of electric generators and speed control. Covers basic elements and operation of photovoltaic power systems including common types of PV cell technologies, PV array structure, and the electrical properties of PV arrays. Discusses efficiency factors such as sun intensity and angle, and the shadowing. Discusses the system integration elements of wind and PV systems including batteries, basic power electronics, and off-grid and on-grid connected systems. Discusses regulatory and safety issues associated with grid-tied systems.

Prerequisite: ELT 106

Contact Hours: 67.5 Contact Hours.

ENY 160 - Manufacturing and Energy (3)

Exposes the student to the principles of energy and power, and basic manufacturing and various energy systems. Includes nonrenewable, renewable and inexhaustible and power systems. Includes manufacturing topics such as production planning, cost saving approaches, automation systems, and selecting appropriate materials.

Prerequisite: MAT 108 and PHY 105

Contact Hours: 45 Contact Hours.

ENY 161 - Energy Industry Fundamentals (4)

Exposes students to the energy industry, including different ways to generate energy, regulatory impact, safety procedures and equipment, and energy transmission systems. This class is an introduction for all students interested in a career in energy - both conventional and renewable.

Contact Hours: 90 Contact Hours.

ENY 235 - Energy Systems Design (3)

Integration of energy system functions in a typical building including: codes and standards; energy economics; electrical system organization; waste heat recovery; utility system optimization; HVAC building system optimization.

Prerequisite: ENY 101

Contact Hours: 67.5 Contact Hours.

ENY 280 - Internship (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 business location and with the direct guidance of the instructor.

Contact Hours: 45 Contact Hours.

ENY 289 - Capstone (1-12)

A demonstrated culmination of learning within a given program of study.

Contact Hours: 15-180 Contact Hours.

ESL - English as a Second Language

ESL 011 - Basic Pronunciation (3)

Provides listening and speaking activities that help students recognize and produce English vowel and consonant sounds and common stress and intonation patterns.

Prerequisite: Appropriate placement scores.

Contact Hours: 45 Contact Hours.

ESL 012 - Intermediate Pronunciation (3)

Provides listening, speaking and reading activities that help students recognize and produce a variety of stress and intonation patterns in English. Helps students to produce problematic English sounds.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ESL 011 (p. 173) or appropriate placement scores.

ESL 021 - Basic Grammar (3)

Assists the student in mastering basic structures in English grammar through oral and written practice.

Contact Hours: 45 Contact Hours.

Recommended Preparation: Appropriate placement scores.

ESL 022 - Intermediate Grammar (3)

Reviews basic grammar and introduces intermediate structures. Provides integrated practice through a variety of oral and written exercises.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ESL 021 (p. 173) or appropriate placement scores.

ESL 023 - Advanced Grammar (3)

Reviews intermediate grammar. Introduces advanced structures with increased emphasis on written communication.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ESL 022 (p. 173) or appropriate placement scores.

ESL 031 - Basic Listening & Speaking (3)

Focuses on listening and speaking activities that help the student communicate more competently. Provides practice with pronunciation, vocabulary, and basic grammatical patterns.

Contact Hours: 45 Contact Hours.

Recommended Preparation: Appropriate placement scores.

ESL 032 - Intermediate Listening & Speaking (3)

Teaches listening, pronunciation, and conversation skills. Increases speed and accuracy in speaking through free and guided conversational practice.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ESL 031 (p. 173) or appropriate placement scores.

ESL 033 - Advanced Listening & Speaking (3)

Provides students with opportunities to increase the listening and speaking skills required in academic and work situations. Emphasizes vocabulary building, listening and note-taking strategies, as well as questioning, discussion, and presentation skills.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ESL 032 (p. 173) or appropriate placement scores.

ESL 041 - Basic Reading (3)

Improves comprehension of simple written texts through vocabulary building and reading strategies.

Prerequisite: Appropriate placement scores.

Contact Hours: 45 Contact Hours.

Recommended Preparation: Appropriate placement scores.

ESL 042 - Intermediate Reading (3)

Helps the student read more quickly and accurately and understand a variety of intermediate level reading material.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ESL 041 (p. 173) or appropriate placement scores.

ESL 043 - Advanced Reading (3)

Prepares the student for academic reading assignments. Assists the student to read more accurately and critically through the development of vocabulary knowledge and reading skills. Introduces research skills.

Prerequisite: ESL 042 or appropriate placement scores.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ESL 042 (p. 173) or appropriate placement scores.

ESL 051 - Basic Composition (3)

Serves as an open-entry, open-exit course of study from basic to intermediate to advanced (5 levels) in speaking, listening, reading, and writing English.

Contact Hours: 45 Contact Hours.

Recommended Preparation: Appropriate placement scores.

ESL 052 - Intermediate Composition (3)

Introduces the fundamentals of paragraph organization and development. Assists the student in developing sentence variety and grammatical competency within well-organized paragraphs.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ESL 051 (p. 174) or appropriate placement scores.

ESL 053 - Advanced Composition (3)

Reviews paragraph organization and develops the skill of writing essays using selected rhetorical modes. Emphasizes accurate use of advanced grammatical structures. Includes summarizing, paraphrasing, and research writing.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ESL 052 (p. 174) or appropriate placement scores.

ESL 055 - Computer Basics for Students (2)

Introduces the basic skills for computer use, including word processing, text entry, and document appearance, editing, spelling, and printing.

Contact Hours: 30 Contact Hours.

Recommended Preparation: Appropriate placement scores or permission of instructor.

ETH - Ethnic Studies

ETH 200 - Introduction to Ethnic Studies (3)

Introduces students to the issues of race and ethnicity. Emphasizes ethnic relations in the United States as it pertains to four major groups: Americans of African, Asian, Latino and Native descent. Explores issues of racial and ethnic identity, racism and discrimination, stereotyping, prejudice, segregation, colonialism, integration and acculturation.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

ETH 212 - African-American Studies (3)

Explores in-depth introduction of Africans to the colonies and historical developments through modern-day America. Focuses on the decisions and choices that have impacted African-Americans through contemporary times.

Contact Hours: 45 Contact Hours.

ETH 224 - Introduction to Chicano Studies (3)

Introduces students to skills development in multicultural education. Covers Chicano history, migration and labor, education, law and Chicano culture.

Contact Hours: 45 Contact Hours.

FER - Fermentation Science

101 - Craft Beer Brewing (4)

Examines fermentation science of craft beer brewing industry with an emphasis on wort production, yeast fermentation process, beer contaminants and how to avoid them, brewery cleaning, maintenance and environmental impact. The laboratory experience includes basic microbiological/scientific techniques and brewery experiences. Students MUST be 21 or older to enroll in this class.

Contact Hours: 90 contact hours (45 lecture hours, 45 lab hours).

FER 201 - Wine Fundamentals (4)

Examines the manufacture of wines, styles of wines in global wine regions, microbiological science of wine fermentation and organoleptic perception of wines. Class activities emphasize reading wine labels, using language to describe different wines, and descriptions of common wine defects through sensory analysis of wines. Students must be 21 years or older to take the class.

Contact Hours: 75 Contact Hours.

FER 203 - Fermented Foods Science (4)

Explores the history and science of fermented foods. Course includes food fermentation lab experiences with dairy, vegetables, sugars and grains. Examines how fermented foods have been used for preservation of food, health attributes and cultural significance.

Contact Hours: 75 Contact Hours.

FIN - Finance

FIN 101 - Introduction to Finance (3)

Provides an in-depth study of the US monetary system, the role of banks as financial intermediaries, and the types of financing. Includes international financial markets and international financial instruments used in importing and exporting, analysis of stock and bond values, the role and process of the stock and bond markets and the derivative marketplace. Enables the student to produce a cash budget, analyze financial statements including all financial ratios used in credit analysis, and determine capital requirements and financing arrangements.

Contact Hours: 45 Contact Hours.

FIN 201 - Principles of Finance (3)

Provides factual knowledge of financial institutions and the monetary system used in the United States in relationship to the global economy. Examines tools and techniques such as capital budgeting, time value of money, analysis of financial statements,

cost of capital, and risk analysis to analyze business decisions, plan and determine project and firm value, and evaluate sources of financing.

Contact Hours: 45 Contact Hours.

FLD - Floral Design

FLD 100 - Introductory Floral Design (3)

Teaches students working in the floral design industry a working knowledge of retail flower shop management & procedures. Introduces students to the basic principles and elements of floral design that can be used for personal or professional industry applications. Students also learn basic care and identification of fresh flowers, design, purchasing, and pricing of various types of floral compositions.

Contact Hours: 67.5 Contact Hours.

Course fees are charged to cover the cost of the consumable course materials, including fresh flowers, used in this class.

FLD 200 - Advanced Floral Design (3)

Focuses on advanced floral design concepts and techniques including special event, wedding and sympathy arrangements.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: FLD 100

Course fees are charged to cover the cost of the consumable course materials, including fresh flowers, used in this class.

FLD 289 - Capstone (4)

Focuses on a demonstrated culmination of learning within the floral design program of study.

Contact Hours: 90 Contact Hours.

FRE - French

FRE 101 - Conversational French I (3)

Introduces beginning students to conversational French and focuses on understanding and speaking French. Covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

Contact Hours: 45 Contact Hours.

FRE 102 - Conversational French II (3)

Continues the sequence for beginning students who wish to understand and speak French. Covers basic conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: FRE 101 or equivalent.

FRE 111 - French Language I (5)

Develops students' interpretive, interpersonal, and presentational communicative abilities in the language. Integrates these skills in the cultural contexts in which the language is used. Offers a foundation in the analysis of culture.

Contact Hours: 75 Contact Hours.

FRE 112 - French Language II (5)

Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the

analysis of culture and develops intercultural communicative strategies.

Contact Hours: 75 Contact Hours.

Recommended Preparation: FRE 111 or equivalent.

FRE 201 - Conversational French III (3)

Continues the sequence for students who wish to continue their study of understanding and speaking French. Covers intermediate level vocabulary, grammar, and expressions.

Contact Hours: 45 Contact Hours.

Recommended Preparation: FRE 102 or equivalent.

FRE 202 - Conversational French IV (3)

Continues the sequence for students who wish to advance their study of understanding and speaking French. Covers intermediate level conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: FRE 201 or equivalent.

FRE 211 - French Language III (3)

Continues French I and II in the development of increased functional proficiency in listening, speaking, reading and writing the French language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This course is one of the Statewide Guaranteed Transfer courses. GT-AH4

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

Required Preparation: FRE 112 or equivalent.

FRE 212 - French Language IV (3)

Continues French I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the French language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This course is one of the Statewide Guaranteed Transfer courses. GT-AH4

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

Required Preparation: FRE 211 or equivalent.

FSW - Fire Science Wildland

FSW 100 - S-190 Introduction to Wildland Fire (1)

Provides instruction in the primary environmental factors that affect the start and spread of wildfire and recognition of potentially hazardous situations. This course must be taken concurrently with FSW 101 Firefighting Training S-130. You must also sign up for FSW 101 S130 to qualify for a red card.

Contact Hours: 15 Contact Hours.

FSW 101 - S-130 Firefighting Training (2)

Provides entry-level firefighter skills. A version of the L-180, Human Factors on the fireline, is included as part of the course. Credit will be issued for S-130. This course must be taken concurrently with FSW 100. You must also take FSW 100 S-190 to qualify for a red card.

Contact Hours: 30 Contact Hours.

FSW 143 - S-212 Wildfire Chain Saws (2)

Provides 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. Must have S190 and S130 certifications or currently be enrolled in FSW 100 and FSW 101.

Prerequisite: FSW 100 and FSW 101 effective Summer 2015

Contact Hours: 38.5 Contact Hours.

GEO - Geography**GEO 105 - World Regional Geography (3)**

Examines the spatial distribution of environmental and societal phenomena in the world's regions; environmental phenomena may include topography, climate, and location of natural resources; societal phenomena may include patterns of population and settlement, religion, ethnicity, language, and economic development. Analyzes the characteristics that define world regions and distinguishes them from each other. Examines the relationships between physical environments and human societies. Examines globalization with emphasis on the geopolitical and economic relationships between more developed and less developed regions.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS2).

Contact Hours: 45 Contact Hours.

GEO 106 - Human Geography (3)

Introduces students to geographic perspectives and methods in the study of human societies by examining the spatial characteristics of populations, language, religion, ethnicity, politics, and economics. Examines the relationships between physical environments and human societies.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS2).

Contact Hours: 45 Contact Hours.

GEO 111 - Physical Geography-Landforms (4)

Introduces the principles of landforms as a major aspect of our natural environment. Incorporates an integrated process of lecture, discussion, and laboratory assignments.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 75 Contact Hours.

GEO 112 - Physical Geography-Weather and Climate (4)

Introduces the principles of meteorology, climatology, world vegetation patterns, and world regional climate classification. Incorporates an integrated process of lecture, discussion, and laboratory assignments and may be transferred to colleges and universities as a science credit.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 75 Contact Hours.

GEO 160 - Global Climate Change (3)

Presents global climate change from an Earth science perspective including explorations of paleoclimatology, atmospheric science, vegetation, fluvial systems, and oceanic circulation. Analyze observed and predicted impacts of climate change on the world's terrestrial regions. Examine interrelationships among economy, society, and public policy as well as geographic variation in greenhouse gas emissions at national and regional scales. Also discussed will be efforts to mitigate climate change and its causes and/or adaptations to global climate change.

Contact Hours: 45 Contact Hours.

GEO 165 - Human Ecology (3)

Provides a current outlook for the global environment, describing the threats imposed on different natural ecological systems. Enables the student to develop a set of intellectual tools and ways of thinking about the environment to evaluate for themselves how serious a given environmental problem will be.

Contact Hours: 45 Contact Hours.

GEO 200 - Geography of Europe (3)

Focuses on a comprehensive study of European geography including physical, historical, agricultural, industrial, cultural and political geographic inter-relationships. Incorporates a broad overview of the forces and trends that have shaped modern Europe.

Contact Hours: 45 Contact Hours.

GER - German**GER 101 - Conversational German I (3)**

Introduces beginning students to conversational German and focuses on understanding and speaking German. Covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

Contact Hours: 45 Contact Hours.

GER 102 - Conversational German II (3)

Continues the sequence for students who wish to understand and speak German. Covers basic patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: GER 101.

GER 111 - German Language I (5)

Develops students' interpretive, interpersonal, and presentational communicative abilities in the language.

Integrates these skills in the cultural contexts in which the language is used. Offers a foundation in the analysis of culture.

Contact Hours: 75 Contact Hours.

GER 112 - German Language II (5)

Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.

Contact Hours: 75 Contact Hours.

Recommended Preparation: GER 111.

GER 201 - Conversational German III (3)

Continues the sequence for students to advance their study of understanding and speaking German. Focuses on intermediate level vocabulary, grammar, and expressions.

Contact Hours: 45 Contact Hours.

Recommended Preparation: GER 102.

GER 202 - Conversational German IV (3)

Continues the sequence for students to advance their study of understanding and speaking German. Focuses on intermediate level conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: GER 201.

GER 211 - German Language III (3)

Continues German Language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the German language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This course is one of the Statewide Guaranteed Transfer courses. GT-AH4

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

Recommended Preparation: GER 112.

GER 212 - German Language IV (3)

Continues German Language I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the German language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This course is one of the Statewide Guaranteed Transfer courses. GT-AH4

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Recommended Preparation: GER 211.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

GER 235 - German Reading-Writing (3)

Enables the student to build vocabulary and develop reading and writing strategies in German to analyze fictional and non-

fictional texts and gain further cultural insight of the German world.

Contact Hours: 45 Contact Hours.

Recommended Preparation: GER 212.

GEY - Geology

GEY 111 - Physical Geology (4)

Studies the materials of the earth, its structure, surface features and the geologic processes involved in its development. This course includes laboratory experience.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (45 lecture hours, 45 lab hours).

GEY 112 - Historical Geology (4)

Studies the physical and biological development of the earth through the vast span of geologic time. Emphasizes the investigation and interpretation of sedimentary rocks, the record of ancient environments, fossil life forms, and physical events, all within the framework of shifting crustal plates. Course includes laboratory experience.

Prerequisite: GEY 111 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (45 lecture hours, 45 lab hours).

GEY 135 - Environmental Geology (4)

Introduces geology and its relationship to man's environment. Covers geologic hazards such as floods, landslides, avalanches, earthquakes and volcanoes. Focuses on surface and groundwater resources in terms of exploitation and man's responsibility to protect these resources from contamination. The geologic aspects of land use practices, as well as mineral and energy resource exploitation are reviewed and related to legislation regarding environmental law.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours.

GEY 205 - the Geology of Colorado (3)

Covers the geologic history of Colorado, with emphasis on formation of mountain ranges, igneous, sedimentary and metamorphic rock types, ore deposits and landforms. Incorporates field experience and/or classroom lectures.

Contact Hours: 45 Contact Hours.

Recommended Preparation: Permission of instructor.

GEY 208 - Geology Field Trip (3)

Involves in-depth field studies into the geology of specific regions both within and outside Colorado. Trips lasting from one to several days' length to study the area constitute the major activity of the course. The specific area of investigation is

indicated in the schedule of classes each time the course is offered.

Prerequisite: Permission of instructor.

Contact Hours: 114 Contact Hours.

See the list of Specialized Geology Courses on the first page of this Course Offerings section. Permission of instructor.

GEY 275 - Special Topics (1-3)

Presents an overview of the special topic including one aspect of the earth and its history as recorded in rocks and rock formations. May also include current changes and impact of historical events and exploration of current topics, issues and activities related to one or more aspects of the named discipline.

Contact Hours: 15 Contact Hours PER CREDIT.

GIS - Geographic Information Systems

GIS 101 - Introduction to Geographic Information Systems (3)

Survey the development, application and use of geographic information systems (GIS).

Prerequisite: None.

Contact Hours: 67.5 Contact Hours.

GIS 110 - Introduction to Cartography (3)

Examines a broad range of map types, emphasizing maps as a communication system with both symbology and specific organizational hierarchies. Discussion and demonstration focuses on essential cartographic principles and practices used for designing maps, with emphasis on cartographic principles resulting in the effective map communication, qualitative messages, and quantitative information.

Contact Hours: 67.5 Contact Hours.

GIS 131 - Global Positioning Systems for Global Information Systems (3)

Introduces the terminology, hardware, and technological principles of GPS. Students will receive an introduction in the fundamentals of using a basic hand-held GPS unit. Data will be integrated with pre-existing spatial data. Fundamentals of mapping and map reading will be covered. Garmin GPS units will be used initially, followed with Trimble GeoExplorers and Pathfinder Office software. Final student projects integrate GPS data within ArcView projects.

Contact Hours: 45 Contact Hours.

GIS 150 - Relational Database Management Systems for GIS (3)

Develop methods and procedures for geographic information systems data, data management, and the complex relationships between data files and a GIS. This course teaches several essential components and methods of successful data and project data management. The objective is to give students a basic understanding of databases, how they are used in a professional GIS environment, and practical experience in designing and implementing the GIS database.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: GIS 101 and GIS 110

GIS 165 - Project Management (3)

Examine the relationships of geographic information systems projects to information technologies for organization planning

and decision making. Course considers project business process, project management methods and roles of project participants.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: GIS 101 and GIS 110

GIS 205 - Applications (3)

Develop competency in web based geospatial information technologies. This course introduces students to concepts and processes of software based geospatial services to deliver geospatial information over networks. The course provides a comprehensive discussion of theory and applied technology of GIS software information services as well as integration of geospatial services into GIS applications.

Contact Hours: 67.5 Contact Hours.

GIS 210 - Intermediate Geographic Information Systems (3)

Build on the spatial analysis principles and concepts of GIS 101. Students work with advanced analytical tools and develop skills in spatial problem solving.

Prerequisite: GIS 101

Contact Hours: 67.5 Contact Hours.

GIS 211 - Spatial Data Modeling and Analysis (4)

Examine techniques for modeling and analyzing spatial data in a GIS. Topics include defining object models and geodatabases as they are used to access geographic data and build data models, creating new information from existing data through data classification, geoprocessing, presentation, and display and using raster analysis to display and analyze spatial data.

Prerequisite: GIS 101 and GIS 150

Contact Hours: 90 Contact Hours.

GIS 212 - Remote Sensing and Digital Image Processing (4)

Introduce concepts and procedures used in remote sensing with an emphasis on integration of aerial and satellite imagery into GIS applications. Apply the science of remote sensing and imagery interpretation to global earth observation characteristics based on remotely sensed data and logical interpretation.

Contact Hours: 90 Contact Hours.

Recommended Preparation: GIS 101

GIS 220 - Geographic Information Systems for Business (3)

Applies GIS spatial analysis to business and considers how GIS contributes to business marketing, development, strategy and operations. Business spatial analysis identifies locations related to geographic distributions of products and services.

Contact Hours: 67.5 Contact Hours.

GIS 221 - Community Assessment and Analysis (3)

Examine significant problems currently facing a variety of community public and private institutions and explore a variety of ways these problems can be analyzed using a GIS. Course focuses on GIS analysis and comparative indicators for cities.

Prerequisite: GIS 101 and GIS 150

Contact Hours: 67.5 Contact Hours.

GIS 275 - Special Topics ()

Provides students with a means to pursue in-depth exploration of special topics of interest.

GIS 280 - Internship (3)

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 business location and with the direct guidance of the instructor/ coordinator.

GIS 285 - Independent Study (3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. Students are reminded that no more than six (6) credit hours of independent study may be applied to any associate degree program.

HHP - Holistic Health Professional**HHP 100 - Complementary Healing Methods (1)**

Explores some of the more widely used alternative/complementary healing methods. Expands the student's health horizons and enables the student to converse in a knowledgeable manner with patients and practitioners.

Prerequisite: CCR 092 or CCR093 or CCR 094

Contact Hours: 15 Contact Hours.

HHP 107 - Managing Life's Stresses (1)

Work with energy, confidence and enthusiasm in your life by learning specific skills that will give you control over stressful situations or people in your life. This experiential class is designed for all who are interested in a higher quality of life and want to reach their full potential. Learn how to relax quickly, improve self-image, improve concentration, and how to control your worry. You can experience freedom from old patterns that create stress, fatigue and restricting beliefs.

Contact Hours: 15 Contact Hours.

HHP 108 - Aromatherapy (1)

While such ancient wisdom on the use of essential oils in health maintenance and the healing of disease has been lost, some tantalizing data from the ancient Egyptians exists and has been verified by modern scientific research. Explores the pharmacokinetics and neurophysiology of essential oils, looking into their origins, extraction, storage, and usage. Enables the student to observe a large number of essential oil remedies and their applications.

Contact Hours: 15 Contact Hours.

HHP 111 - Herbology I (1)

Explores the pharmacokinetics and composition of herbs and their effect on the body systems. Focuses on the habitat, harvesting, storage and usage of a select group of herbs. The use of herbs in health maintenance and the healing of disease predates written history. Herbs have been found by archeologists in Paleolithic burials and throughout literature on the ancient Chinese and Egyptians verified by modern scientific research.

Prerequisite: Prerequisite: CCR 092 or CCR 093 or CCR 094.

Contact Hours: 15 Contact Hours.

HHP 112 - Homeopathy (1)

Presents a basic overview in the fundamentals, principles, and history of homeopathy. Conditions that can be helped using homeopathic remedies will be discussed, and remedies that are

appropriate for acute and first aid conditions will be presented. Common case taking techniques will be taught.

Contact Hours: 15 Contact Hours.

HHP 122 - Qigong (1)

Emphasizes the application of the 18 soft exercises found in Qigong to help relax, increase strength, agility and vitality while calming the mind.

Contact Hours: 15 Contact Hours.

HHP 130 - Reiki Level One (1)

Explores the traditional Usui use of Reiki. Covers the history and development of Reiki work, beginning in Japan, to Hawaii, to the U.S., and later Europe. Focuses on the fundamental beliefs and the dynamics of the Reiki process. Enables each student to receive Reiki attunements to prepare for the Reiki energy work. Each class member gives and receives a Reiki hands-on treatment session.

Prerequisite: CCR 092 or CCR 093 or CCR 094.

Contact Hours: 15 Contact Hours.

HHP 142 - Intro to Traditional Chinese Medicine (3)

Introduces the theories and practice of Traditional Chinese Medicine (TCM), an ancient medical art. Basic theories are discussed, differentiation skills are practiced and treatment modalities are demonstrated.

Prerequisite: CCR 092 or CCR 093 or CCR 094.

Contact Hours: 45 Contact Hours.

HHP 144 - Therapeutic Applications of the Human-Animal Bond (1)

Explores the concept of the human-animal bond and a variety of therapeutic applications of such a bond. Focuses on the health benefits of pet ownership, pets in the workplace, animal-assisted activity and animal-assisted therapy.

Contact Hours: 15 Contact Hours.

HHP 150 - Interspecies Communication (1)

Explores interspecies communication as a means of listening deeply to what the animals want to relate to people and speaking back in a way they can understand. Focuses on interspecies communication that can be applied to a number of situations including: healing emotional issues, for both animals and people; uncovering root causes of disease; supporting an animal's death process; helping people choose new pets and bringing harmony into relationships between people and their pets.

Contact Hours: 15 Contact Hours.

HHP 152 - Animal Massage (1)

Introduces an understanding of canine and feline massage, including surface anatomy, blood flow direction, body language, and massage techniques for general relaxation and sports massage. Includes hands-on application.

Contact Hours: 15 Contact Hours.

HHP 155 - Meridian Accupoint Tapping (2)

Introduces the theory and practical applications as well as provides advanced experiential instruction and demonstrative experience of using light finger tapping on the meridian end points commonly used in traditional Chinese acupuncture. It

teaches the identification, assessment, balancing and clearing of the mind-body in the belief systems of individuals and special populations. This course offers hands-on instruction emphasizing identifying, assessing, balancing, and clearing the mind-body energy system in self and others.

Contact Hours: 30 Contact Hours.

HHP 161 - Meditation for Health (1)

Incorporates the practice of fundamental techniques for training your mind to be quiet and peaceful; to focus your thoughts on what you choose; to stimulate the Mind-Body conversation to enhance your own health.

Contact Hours: 15 Contact Hours.

HHP 166 - Introduction to Reflexology (1)

Teaches the student foot anatomy, basic hand stroke and foot reflex points.

Contact Hours: 22.5 Contact Hours.

HHP 168 - Reflexology of the Hands and Feet (3)

Describe and examine the use of Reflexology on the hands and feet, where students will learn and apply basic reflexology techniques, anatomy of the hands and feet as well as standard documentation procedures. Provide further training in postural assessment exercises, composure of standard SOAP Notes for documentation and evaluation of case studies. Assess the body-mind connection in the physiological response to stress, learn several Chinese energy meridians and understand application of the major energy chakras.

Contact Hours: 45 Contact Hours.

HHP 190 - Crystal and Mineral Usage in Health Care (1)

Introduces the student to crystal and mineral types, their properties and how to clear, clean, and use the personal use or with clients. Incorporates hand-on experience to feel the different energies of crystals and minerals.

Contact Hours: 15 Contact Hours.

HHP 200 - Bach's Essences: Health Through Mental Harmony (2)

Introduces students to the concepts of energy work and complementary healing modalities that impact health and wellness. This class will aid students in identification of the impact of stressors on health, and through identification of stressors, aid them in restoring balance and harmony to their lives, by application of appropriate essences.

Contact Hours: 30 Contact Hours.

HHP 204 - Applied Aromatherapy (3)

Examination of aromatherapy will be implemented from a holistic view. How different practitioners use this healing art will also be studied, including aromatherapists, medical practitioners, nurses, counselors, psychologists, massage therapists, herbalists and manufacturers of perfume. Current research on essential oils will be covered, and how this research is advancing the practical applications of aromatherapy. This course will also explore holistic factors in aromatherapy, among them the spiritual, biological, social and environmental sectors.

Prerequisite: CCR 092 or CCR 093 or CCR 094.

Contact Hours: 45 Contact Hours.

HHP 208 - Advanced Musculoskeletal Anatomy (2)

Presents an intensive study of the musculoskeletal system. Focus will be on understanding the bony structures and the relationship of the muscular system to the skeletal system from a dynamic perspective. Classes include lecture and work with the Maniken system building muscles with clay on a scaled down and anatomically accurate skeleton. Clinical connections will be made to take the study of anatomy out of the purely technical arena, and into the practical. The other nine systems of the body will be touched on briefly, because to clinically understand the practical applications of anatomy, you have to be aware of the interconnectedness of all the systems of the body.

Prerequisite: BIO 106

Contact Hours: 30 Contact Hours.

HHP 211 - Herbology II (2)

Continues Herbology I (HHP 111) and explores the advanced usage of herbs in prevention and treatment of disease. The exploration of pharmacokinetics, composition of herbs, and effects on the body will also be explored.

Prerequisite: HHP 111

Contact Hours: 30 Contact Hours.

HHP 214 - Exploring Your Dreams (1)

This participatory course of dream interpretation leads to an awareness of the benefits of dreams as a valuable tool for facilitating health and personal growth. Participants learn simple tools for dream recall, recording dreams and uncovering the many levels of meaning that are found in every dream. Students evaluate their lifestyles and develop an individual concept of wellness and optimal health by tapping into their dreams as a source for reducing stress and increasing spirituality and inner growth.

Contact Hours: 15 Contact Hours.

HHP 223 - Jin Shin Level I (2)

Jin Shin provides basic understanding of the human energy system from an Asian perspective. Jin Shin is non-invasive, performed with light touch on various acupoints on the body. Enables the student to learn to identify, access, open and balance the energy of self and others within the Jin Shin system. Four Jin Shin sessions are given and received.

Contact Hours: 30 Contact Hours.

HHP 224 - Introduction to Massage therapy (1)

Teaches hands-on techniques to complete a full body massage along with integration of healing touch. Swedish massage techniques and basic foot reflexology combined with a complete energy balance are performed and experienced by each student.

Contact Hours: 15 Contact Hours.

HHP 225 - Expanded Concepts of Massage (1)

Builds on techniques learned during Introduction to Massage. Includes application of massage techniques with special populations. Examines related basic therapeutic approaches such as hydrotherapy and acupressure. Considerations for developing professional practice are also addressed.

Prerequisite: HHP 224. This course can be taken concurrently.

Contact Hours: 15 Contact Hours.

HHP 229 - Wellness Coaching (1)

Provides the tools to facilitate oneself and others in the movement towards wellness. Enables the student to learn assessment skills, basic coaching skills, establishing contacts and goals for change.

Contact Hours: 15 Contact Hours.

HHP 230 - Jin Shin Level II (2)

Allows the student who has completed HHP 223 to gain advanced experience with this hands-on non-invasive Chinese technique. An expansion of Jin Shin Level One material includes how to read combination pulses and to do flows that balance the body at deeper levels. At the end of Jin Shin Level Two the students will be able to take pulses and administer a full session of Jin Shin to themselves and others. A certificate will be issued to passing students that will place them at Jin Shin Practitioner status within the High Touch Jin Shin Network.

Prerequisite: HHP 223. This course can be taken concurrently.

Contact Hours: 30 Contact Hours.

HHP 231 - Advanced Wellness Coaching (3)

Trains students to be health and wellness professionals and use advanced coaching skills to assist their client in making lasting lifestyle change. Students demonstrate learning of a systematic coaching process based on behavioral change psychology, human motivation, health promotion and professional coaching competencies. Students gain advanced coaching skills to support and motivate clients to make behavioral changes needed to live healthier lives.

Contact Hours: 45 Contact Hours.

HHP 234 - The Sacred Wild (1)

Assists the student in reconnecting with the inner and outer landscapes of the sacred wild. This is a newly emerging field of ecopsychology that explores the depth and breadth of this deep primordial connection.

Contact Hours: 15 Contact Hours.

HHP 240 - Holistic Nutrition: Digestive Healing (3)

Examines digestive health as a major determinant of overall health in the body. Trains students to use a holistic framework to approach topics in digestion, nutrition, and general health. Describes different digestive imbalances and summarizes gut healing protocols to create balance. Students will identify and discuss current topics in holistic nutrition.

Contact Hours: 45 Contact Hours.

HHP 242 - Healing Touch Level I (1)

Healing Touch is an energy-based therapeutic approach to healing. Enables the student to develop and use touch as a means of assessing a clients/patients state of wellness through the intentional use of touch. Participants are given specific instructions in developing touch sensitivity and practice the assessment and healing methods. Healing Touch is a multi-level program that moves from beginning to advanced practice. After completion of Level 3, a person is eligible to apply for certification as a healing touch practitioner.

Contact Hours: 15 Contact Hours.

HHP 243 - Healing Touch Level II (1)

Allows the person who has completed Healing Touch Level I to gain the specific skills necessary to become an advanced practitioner. Emphasizes experiential learning and focuses on developing healing sequences for specific client needs. Back techniques are introduced, and the therapeutic interactions for specific emotional and physiological problems are discussed and practiced.

Prerequisite: HHP 242. This course can be taken concurrently.

Contact Hours: 15 Contact Hours.

HHP 245 - Healing Touch Level III (1)

Includes further development of Higher Sense Perception (HSP), sequencing of healing techniques, working with guidance, self healing, self development, learning about other healers and advanced healing methods. Level III Healing Touch is for students who have completed Level I and Level II and desire more inn-depth experience.

Contact Hours: 15 Contact Hours.

Recommended Preparation: HHP 242 (p. 181) and HHP 243 (p. 181)

HHP 246 - Second Degree Reiki (1)

Teaches the learning and meaning of the three traditional Usui symbols. Incorporates in-depth discussion about application of the three symbols. Students learn about the necessary preparation of a Reiki therapist in offering treatments. One attunement is given to each student. Each member gives and receives a Reiki treatment session, utilizing the three Reiki symbols. Long Distance and Mental Reiki processes are learned. Reiki Therapist Certification available upon completion.

Prerequisite: HHP 130. This course can be taken concurrently.

Contact Hours: 15 Contact Hours.

HHP 249 - Journaling the Healing Journey (1)

Incorporates using a journal as an effective tool for looking at our personal growth process, as well as for helping clients in their healing process. Journaling helps develop memory, imagination, feeling, intuition, and other creative aspects of ourselves. Using a journal in health practices can accelerate the healing process for clients. Teaches journaling skills and how to focus specifically on healing through various techniques.

Contact Hours: 15 Contact Hours.

HHP 250 - Teacher Training Institute for Yoga (10)

Covers the requirements to be professional Hatha Yoga teachers. Enables participants to understand and practice Yoga and develop skills to teach a wide variety of people in various settings.

Contact Hours: 225 Contact Hours.

HHP 252 - Holistic Health Keystone (3)

Provides students with a comprehensive introduction to the philosophy, theory and practice of Holism/Holistic Health, how it integrates into the field of Complimentary Medicine and the role of a professional holistic practitioner. Students will gain an inclusive and introspective perspective of various holistic modalities used to facilitate the healing process and maintain optimal health. Students will analyze and research holistic health

concepts and corresponding body-mind responses to choose a holistic modality for their Capstone project.

Contact Hours: 45 Contact Hours.

HHP 260 - Advanced Reflexology (2)

Demonstrate and perform advanced reflexology techniques. Acquire advanced conceptual content on new information and skill sets about reflexology for hands and feet and introduce anatomy and reflexology of the ear in order to learn the process of describing and applying reflexology protocols for specific issues. Students will assimilate information from previous coursework in order to complete the outline for the final research paper, discuss ethics and business plans and prepare for the reflexology practicum.

Prerequisite: HHP 164, HHP 166, and HHP 169.

Contact Hours: 30 Contact Hours.

HHP 261 - Ethics in Holistic Touch Therapies (2)

Examine ethical issues acquiring knowledge associated with the practice of holistic touch therapies, including: massage therapy, reflexology and other touch modalities. Emphasis will be creating a safe working and healing environment and on addressing healing presence in treatment, professional codes of ethics, scope of practice, levels of safe and appropriate touch, basic psychological and physical dynamics of practitioner/client relationships, confidentiality of client information as well as effective communication with clients and peers.

Contact Hours: 30 Contact Hours.

HHP 263 - Creating a Holistic Business Practice (2)

Focuses on the necessary skills for a holistic practitioner to start an independent practice. Includes self-assessment of professional skills, the business plan for marketing, finances, an environmental scan, required paperwork to file with the State of Colorado, and the actual design of the practice.

Contact Hours: 30 Contact Hours.

HHP 264 - Advanced Aromatherapy for Certificate (4)

Incorporates previous introductory learning in Aromatherapy and leads to a higher level of understanding for persons interested in utilizing Aromatherapy as a healing modality in practice. This course prepares the student to use essential oils in a safe and therapeutic method and to develop careers in Aromatherapy or as a complement to existing practices. The student will learn how to consult with clients, perform evaluations, recommend appropriate oils and how to apply them in a safe manner.

Prerequisite: HHP 204

Contact Hours: 60 Contact Hours.

HHP 265 - Gift of Self-Esteem (1)

Explores self-talk, self-appreciation, self-responsibility, belief, expectations and provides tools for increasing personal power.

Contact Hours: 15 Contact Hours.

HHP 269 - Healing Presence (1)

Provides the opportunity to explore the meaning of presence through the process of increased self-awareness and self-discovery, as well as development of essential skills for connecting on a higher level with oneself and others.

Contact Hours: 15 Contact Hours.

HHP 288 - Practicum (2)

Provides the learner the opportunity for the practical application of classroom theory within a given program of study.

HHP 289 - Capstone (1)

Provides students the opportunity to demonstrate culmination of learning within a given program of study that builds upon the basic theoretical frameworks of CAM and Holism by creating a self-directed capstone project in conducting their own field-based research study in their community through designing a therapeutic intervention using their chosen treatment modality a specific health condition, analyzing their data, writing a formal report on their findings and professionally presenting their findings. Students will work with instructor to design their own Capstone project towards the end of the program.

Contact Hours: Contact hours will vary with credits and project design..

Recommended Preparation: HHP 252 (p. 181)

HIS - History

HIS 101 - Western Civilization: Antiquity-1650 (3)

Explores a number of events, peoples, groups, ideas, institutions, and trends that have shaped Western Civilization from the prehistoric era to 1650. Reflects the multiple perspectives of gender, class, religion, and ethnic groups. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 102 - Western Civilization: 1650-Present (3)

Explores a number of events, peoples, groups, ideas, institutions, and trends that have shaped Western Civilization from 1650 to the present. Reflects the multiple perspectives of gender, class, religion, and ethnic groups. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 111 - The World: Antiquity-1500 (3)

Explores a number of peoples, groups, ideas, institutions, and trends that have shaped World History from the prehistoric era to 1500. Reflects the multiple perspectives of gender, class, religion, and ethnic groups in a broad global sense. Focuses on the common denominators among all people. This approach goes beyond political borders to provide a better appreciation for different cultures. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 112 - The World: 1500-Present (3)

Explores a number of peoples, groups, ideas, institutions, and trends that have shaped World History from 1500 to the present. Reflects the multiple perspectives of gender, class, religion, and ethnic groups in a broad global sense. Focuses on the common denominators among all people. This approach goes beyond political borders to provide a better appreciation for different cultures. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 121 - U.S. History to Reconstruction (3)

Explores events, trends, peoples, groups, cultures, ideas, and institutions in North America and United States history, including the multiple perspectives of gender, class, and ethnicity, between the period when Native American Indians were the sole inhabitants of North America, and the American Civil War. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 122 - U.S. History Since the Civil War (3)

Explores events, trends, peoples, groups, cultures, ideas, and institutions in United States History, including the multiple perspectives of gender, class, and ethnicity, between the period of the American Civil War and the present. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 203 - Civil War Era in American History (3)

Explores the causes, course, and consequences of the American Civil War, from the Colonial period to the 21st Century, in order to understand the multiple meanings of a transforming event in American history. Students will explore the meanings of the war as defined in many ways: national, sectional, racial, gender, constitutional, individual, social, intellectual, or moral. Students will closely examine four broad themes: the crisis of union and disunion in an expanding republic; slavery, race, and emancipation as national problem, personal experience, and social process; the experience of modern, total war for individuals and society; and the political and social challenges of Reconstruction. This course is one of the Statewide Guaranteed transfer courses: GT-HI1.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: (GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 205 - Women in the World (3)

Examines the roles, experiences, and contributions of women in world history and explores ways in which women's history modifies the traditional interpretations of historical events.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: (GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 207 - American Environmental History (3)

Traces and analyzes the relationships between Americans and their natural environments throughout the history of the United States. Environmental history interprets the changing ways diverse people have used and viewed their environments over time. Examines the development of conservation movements and environmental policies in modern America.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: (GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 208 - American Indian History (3)

Analyzes historical and social-cultural change for the Native Americans from pre-colonial America to the present, emphasizing those processes and relations with non-Native Americans that have contributed to the current conditions.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 209 - History of the American Southwest (3)

Traces and analyzes the cultural and historical development of what is now the southwestern United States; a region defined most by its arid environment and the cultural and political interactions of Southwest Indians, Spanish conquerors, Mexican settlers, late-coming Yankees, artist and artisans and modern Sunbelt migrants.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CCR 092 (p. 150), CCR 093 (p. 150), or CCR 094 (p. 150) or equivalent testing scores. These courses may be taken concurrently.

HIS 215 - Women in U.S. History (3)

Examines women's changing roles in American history from the pre-colonial native population to the present. Emphasizes the nature of women's work and the participation of women in the family, political, religious, and cultural activities and in social reform movements.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 225 - Colorado History (3)

Presents the story of the people, society, and cultures of Colorado from its earliest Native Americans, through the Spanish influx, the explorers, the fur traders and mountain men, the gold rush, railroad builders, the cattlemen and farmers, the silver boom, the tourists, and the modern state.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 235 - History of the American West (3)

Traces the history of the American West, from the Native American cultures and the frontier experiences of America's earliest, eastern settlers, through the Trans-Mississippi West, across the great exploratory and wagon trails, and up to the present West, be it urban, ranching, reservation, resource management, or industrial. Emphasizes the north and central parts of the West.

Prerequisite: CCR 092 CCR 093 CCR 094

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 236 - U.S. History Since 1945 (3)

Focuses on the major political, economic, social, and cultural developments that have shaped modern America from 1945 to the present.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 243 - History of Modern China (3)

This course traces the political, ideological, economic, religious, social, and cultural developments of modern China from the Qing dynasty through the political and economic revolutions of the 20th century.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 244 - History of Latin America (3)

Focuses on the major political, economic, social, and cultural influences that have shaped Latin America from pre-European conquest to the present. Emphasizes the early history of Latin America but connects it to the present.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 245 - U.S. in the World (3)

Focuses on major themes of United States history in the context of worldwide historical phenomena, including global contacts and exchange, colonial frontiers and international trade, America's influence on the age of revolutions, industrialization

and movement of populations, urbanization and rural change, and expansion of state power and rise of social movements. Through readings and discussions on problems in political, social, public and personal history, students will gain an understanding of historical processes and methodology and will learn how to use critical historical analysis in order to achieve a greater perspective on the US's role in world history.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 246 - History of Mexico (3)

Focuses on the major political, economic, social, and cultural developments of Mexico from Pre-Columbian times to the present.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

HIS 247 - 20th Century World History (3)

Investigates the major political, social, and economic developments, international relationships, scientific breakthroughs, and cultural trends that have shaped the various global regions and nation-states from 1900 to the present. Emphasizes the interactions of global regions and nation-states.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 248 - Historical Roots of Modern Russia (3)

Traces the major political, ideological, economic, religious, social, and cultural developments of Russia from the establishment of the Kievan State to the present. Emphasizes the sources and development of the Soviet Union and the former-Soviet Union state(s).

Contact Hours: 45 Contact Hours.

Recommended Preparation: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

HIS 249 - History of Islamic Civilization (3)

Surveys the tenets of Islam and the political, social and cultural history of the civilizations which embraced it from the 6th century to the modern day. Focuses on the diversity and dynamism of Islamic civilizations through time by looking at legal systems, scientific and artistic accomplishments, philosophical heterogeneity and political developments.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 250 - African American History (3)

Explores the experiences and contributions of African Americans from the colonial period to the present. Emphasizes the social

and economic lives and roles of African Americans, their roles in politics and war, their achievements, and movements for self-help and civil rights.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 251 - The History of Christianity in the World (3)

Surveys the history of Christianity and its impact on the world from its Jewish origins in the ancient Mediterranean system, into its European expansion, and ending with its modern global presence. Analyzes foundational theology, the impact of significant events, and the role of key people in their historical contexts. Inspects Christianity's relationship with Judaism, Islam, the Enlightenment, modernity, moral systems and values. Provides students with an appreciation of the broad impact of the faith.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 255 - The Middle Ages (3)

Focuses on political, social, cultural, economic and intellectual developments in Europe, Byzantium and the Islamic world from the collapse of Rome through the Renaissance, approximately A.D. 400-1400.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 256 - History of Denver (3)

Introduces students to the history of Denver. Incorporates academic and popular perspectives with emphasis on historically important facts and analysis as well as on the more colorful historical issues, events and personalities. Focuses primarily on the history of Denver from its founding during the Pikes Peak Gold Rush to the present time. Features the colorful people and the major events by which Denver established itself as the Queen City of the High Plains.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

HIS 259 - Modern Middle East (3)

Explores the political, economic, social and cultural development of the Middle East from the late Ottoman Empire to the present. Focuses upon the influences of Islam and Western ideas, diplomacy, and economic involvement upon institutions and ideas of modern Middle Eastern society, while exploring the perspectives of gender, class, race, and ethnicity. Also focuses upon developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 260 - U.S. Foreign Relations History (3)

Provides an overview of the history of United States foreign relations from the colonial era to the present and includes the pertinent political, military, economic, diplomatic, social, religious, ideological and cultural topics. At various points, issues such as race, class, gender, immigration, expansion, and the environment will be covered. This course also focuses on developing, practicing and strengthening the skills historians use while constructing knowledge in the discipline.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-HI1).

Contact Hours: 45 Contact Hours.

HIS 265 - Writing About History (3)

This course develops the skills of historical writing, including the use of rhetorical devices in persuasive historical arguments, critical analysis of historical problems, writing and revision of multiple drafts, different technologies of research and writing, and evaluation of historical sources for relevance and reliability. Through reading a variety of secondary and primary sources and engaging in several types of historical writing and conversations, students extend their understanding of the conventions of clear and concise writing about history. They also devise strategies to communicate historical information by identifying workable topics, locating and annotating primary and secondary sources in libraries, archives and published materials, and adapting their writing style to communicate with a variety of audiences.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: (GT-CO3).

Contact Hours: 45 Contact Hours.

HIT - Health Information Technology

HIT 101 - Health Information Management Science (3)

Introduces the student to the health record, from inception to completion. Emphasis is on form, content and regulations impacting the health record in the various health care settings. Other areas to be discussed include the computerized aspects of the health record as well as the functions and responsibilities of the health information department. This course also examines various health care delivery systems and health care practitioners. The dilemmas of health care with attention directed to current events and how these events impact our professions are discussed.

Contact Hours: 45 Contact Hours.

Recommended Preparation: Placement into CCR 093 (p. 150) or above.

HIT 105 - Principles of Healthcare Reimbursement (3)

Provides students with the knowledge needed to identify and perform necessary tasks involved in healthcare reimbursement systems. Topics will include reimbursement principles of various healthcare plans, prospective payment systems, the importance

of clinical coding, compliance with regulations and related issues of fraud and abuse.

Prerequisite: HIT 101. This course may be taken concurrently.

Contact Hours: 45 Contact Hours.

HIT 111 - Health Data Management & Information Systems (3)

Introduces the practice of maintenance, compilation, analysis, and presentation of healthcare statistical data. Discussion is focused on the use, collection, presentation and verification of health care data including fundamental concepts of descriptive statistics; data validity and reliability; data presentation techniques; and vital statistics. Introduces the electronic health record (EHR), health informatics and the infrastructure required for the EHR. Data reliability and validity will be emphasized.

Prerequisite: Prerequisite/Corequisite: HIT 101

Contact Hours: 45 Contact Hours.

HIT 112 - Legal Aspects for Health Records (2)

Introduces the student to the legal system and identified the role of the HIM professional in this system. Specific Federal and State laws are identified and discussed as they relate to the release of medical information. Proposed Federal and State legislation that affects the health care industry is examined and discussed.

Prerequisite: HIT 101. This course may be taken concurrently.

Contact Hours: 30 Contact Hours.

HIT 122 - Workflow Fund of Healthcare (3)

This course covers the fundamentals of health workflow, process analysis, and redesign. Also includes medical practice automation, dealing with the topics of process validation, quality management, and change management.

Prerequisite: Prerequisite/Corequisite: HIT101. This course may be taken concurrently.

Contact Hours: 45 Contact Hours.

HIT 188 - Health Information Practicum I (2)

Provides a directed clinical experience in a health information department in a health care facility. This experience focuses on the practice of skills related to the application of legal principles, record analysis and abstraction and record retention and retrieval.

Prerequisite: HIT 220/Corequisite HIT 220

Contact Hours: Lecture: 15 Hours; Lab: 22.5 Hours.

HIT 220 - ICD Coding I (3)

Introduces the ICD coding classification system and provides a basic understanding of ICD structure, conventions and principles utilized in code assignment. The student will be introduced to the official coding guidelines. They will apply knowledge of anatomy, physiology, pathophysiology and pharmacology in the assignment of diagnostic and procedural codes.

Prerequisite: HIT 101, MOT 125, MOT 133, MOT 135.

Corequisite: HIT 221

Contact Hours: 45 Contact Hours.

HIT 221 - ICD Coding II (2)

Builds upon the basic skill sets learned in HIT 220. This course will focus on the intermediate application of ICD structure,

conventions and principles utilized to code case scenarios and complex diagnostic and procedural statements. The student will utilize advance application of coding and reporting standards as they apply to facility coding.

Contact Hours: 30 Contact Hours.

HIT 222 - Quality Management (3)

Introduces the student to the basic concepts of quality management in the health care environment. Requirements by regulatory agencies regarding quality, utilization and risk management are discussed. Data collection, verification, analysis and presentation techniques will be studied. The course emphasizes the ongoing use of objective data and feedback to improve processes, systems and patient outcomes.

Prerequisite: MAT107, MAT 108, MAT 120, MAT 121, MAT 122, MAT 125 or MAT 135. This course may be taken concurrently.

Contact Hours: 45 Contact Hours.

HIT 225 - Health Information Management (3)

Concentrates on the principles of management as they relate to the administration of the health information management department as part of a health care organization.

Prerequisite: Prerequisite/Corequisite: HIT 101

Contact Hours: 45 Contact Hours.

HIT 231 - ICD Coding III (5)

Provides an advanced study of ICD coding conventions and principles. DRG and case mix logic along with regulations regarding their use in conjunction with optimization and compliance issues will be discussed. CPT/HCPCS in both the hospital-based outpatient and physician office settings will be studied. Code 3 software will be used for code assignment.

Prerequisite: Prerequisite/Corequisite: HIT 220 and HIT 221.

Contact Hours: 75 Contact Hours.

HIT 241 - CPT Coding Basic Principles (3)

Provides the student with skill sets to apply the current procedural terminology (CPT) and HCPCS code set principles and guidelines for application in reporting/communicating information and data about clinical services provided to patients by healthcare providers. Includes understanding what the CPT nomenclature is, how and why it is used, and guidelines for each code category and how it is applied to represent services within each code category.

Prerequisite: Prerequisite/Corequisite: HIT 220 and HIT 221.

Contact Hours: 45 Contact Hours.

See the list of Specialized Health Information Technology Courses on the first page of this Course Offerings section.

HIT 288 - Health Info Practicum II (2)

Focuses on the ability of the student to apply classroom knowledge in a clinical setting, practice professionalism, gain insight into the functions of the department and understand the relationship of health records to the facility as a whole. Emphasis is on the ability to act independently, complete assigned projects and demonstrate a good understanding of health information management concepts.

Contact Hours: 60 Contact Hours.

Recommended Preparation: Students must meet with HIT Program Director in order to enroll in this class.

HIT 289 - HIT Capstone Course (3)

Offers student a comprehensive review of all HIT courses in preparation to take national exam, utilizing Study Guides and Mock Exams; offers student a 60 hour professional practicum experience (PPE) to apply classroom knowledge in a clinical setting; practice professionalism, gain insight into the functions of the department, understand the relationship of health records to the facility as a whole, demonstrate the ability to act independently, complete assigned projects and demonstrate a good understanding of health information management concepts.

Prerequisite: Prerequisite/Corequisite: HIT 188

Contact Hours: 75 Contact hours.

This course is to be taken in the last semester and students must meet with the Practicum Coordinator in order to enroll in this course

HLT - Horticulture and Landscape Technologies

HLT 101 - Introduction to Horticulture (4)

Introduces the biology of horticultural plants, and basic horticultural practices.

Contact Hours: 90 Contact Hours.

HLT 130 - Landscape Design I (3)

Teaches basic graphic communications and drafting. Introduces students to design theory and the visual thinking and problem solving techniques used in landscape design. Students participate in peer reviews of their work.

Contact Hours: 67.5 Contact Hours.

HLT 131 - Sustainable Horticulture (3)

Examines the sustainable practices in landscape horticulture including the principles of xeriscape and industry-accepted best management practices and their utilization.

Contact Hours: 67.5 Contact Hours.

HLT 150 - Irrigation I (3)

Introduces students to relevant irrigation components and their use, installation and maintenance.

Contact Hours: 67.5 Contact Hours.

HLT 151 - Irrigation II (3)

Introduces students to irrigation system best management practices. Topics include electric and hydraulic troubleshooting, repair, efficiency and water conservation practices.

Prerequisite: HLT 150

Contact Hours: 67.5 Contact Hours.

HLT 160 - Greenhouse Management (4)

Covers greenhouse design, systems, management, and the major greenhouse crops and their cultural needs.

Contact Hours: 90 Contact Hours.

Recommended Preparation: HLT 101

HLT 165 - Nursery and Garden Center Management (4)

Introduces students to the wholesale and retail nursery and garden center industry through lectures and site visits. Topics discussed in this course include organizational structures, facilities layout, production and production management practices, nursery stock labeling and quality standards, occupational safety compliance, pricing and performance benchmarking.

Contact Hours: 90 Contact Hours.

Recommended Preparation: HLT 101

HLT 202 - Plant Health Care (4)

Introduces the fundamental concepts of integrated pest management and plant health care. Teaches students to diagnose pest and disease problems and formulate site-specific prevention and control strategies.

Contact Hours: 90 Contact Hours.

Recommended Preparation: HLT 101

HLT 208 - Pesticide Safety and Use (2)

Familiarizes students with the safe handling of pesticides used in horticulture and the laws and regulations that govern all facets of pesticide use in Colorado. Can be used as preparation for completing the Colorado Department of Agriculture's pesticide licensure exams.

Contact Hours: 45 Contact Hours.

Recommended Preparation: HLT 101 and HLT 202

HLT 210 - Landscape Management (4)

Uses a discussion of landscape maintenance practices and best management practices as a launching point for the student to develop a site management plan and understanding of landscape maintenance contracting. Topics include weed identification, tree and shrub pruning, flower bed maintenance turf care, client care and crew management practices.

Contact Hours: 90 Contact Hours.

HLT 211 - Arboriculture (3)

Discusses the installation and life-long care of trees in the landscape. Topics include equipment use and care, ANSI tree care standards, industry safety practices, best management practices and tree care industry business practices.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: BIO221 or HLT101 or NRE 100 and HLT 210 and HLT 240

HLT 221 - Woody Plants: Trees and Conifers (3)

Teaches the identification, landscape usage and culture of regionally adapted deciduous trees and conifers.

Contact Hours: 67.5 Contact Hours.

HLT 222 - Woody Plants: Shrubs and Vines (3)

Teaches the identification, landscape usage and culture of regionally adapted shrubs and vines.

Contact Hours: 67.5 Contact Hours.

HLT 223 - Annuals, Bulbs, and Grasses (2)

Teaches the identification, landscape usage and culture of regionally adapted annual color crops, ornamental grasses, and bulbs.

Contact Hours: 45 Contact Hours.

HLT 224 - Herbaceous Perennials (4)

Teaches the identification, landscape usage and culture of regionally adapted herbaceous perennials.

Contact Hours: 90 Contact Hours.

HLT 226 - Interior Plants (2)

Teaches the identification (common and botanical names), usage and culture of interior plants common to indoor environments. Soil medias, fertilizers, environmental conditions, common pests and diseases and their control will be explored. Industry production and business practices common to this area are also examined.

Contact Hours: 45 Contact Hours.

HLT 230 - Landscape Design II (3)

Utilizes an understanding of the principles and elements of landscape design as the basis of an exploration of the selection of landscape materials, features and layouts to create functional landscape designs; introduces grading plan development and the rendering of hardscape construction details. Students present their plans to a client or review panel.

Prerequisite: HLT 130

Contact Hours: 67.5 Contact Hours.

HLT 232 - Landscape Design III (3)

Concludes the student's learning in the area of landscape design with a consideration of relevant business practices a final individual project and the development of a final professional portfolio. Students conclude the course with a presentation of their projects and portfolios to a review panel.

Prerequisite: HLT 131 and HLT 230

Contact Hours: 67.5 Contact Hours.

HLT 236 - Landscape Construction (4)

Introduces students to the fundamentals of landscape construction, including construction equipment, safety practices, grading, deck, retaining wall, paving, and water feature construction. During labs students construct various landscape elements.

Contact Hours: 90 Contact Hours.

HLT 237 - Landscape Bidding and Estimating (2)

Teaches the process of creating and submitting bids for landscape construction projects. Plan reading, estimating procedures and the bid submission process are all discussed.

Contact Hours: 45 Contact Hours.

Recommended preparation: MAT 107 (p. 204) and HLT 236 (p. 188)

HLT 240 - Introductory Soil Science (4)

Discusses the formation, physical properties, chemical properties and management of soils emphasizing conditions that affect plant growth. The principles of soil fertility and practice of fertilizer use is also discussed.

Contact Hours: 90 Contact Hours.

Recommended Preparation: HLT 101 and CHE 101.

HLT 242 - Turfgrass Management (4)

Discusses all aspects of golf and sports turf management and culture, including the design, construction, and renovation of golf courses, baseball, football and soccer fields; safety standards and practices; and non-turf maintenance practices.

Contact Hours: 90 Contact Hours.

Recommended Preparation: HLT 210 and HLT 240

HLT 250 - Irrigation III: Design (2)

Prepares students to design landscape irrigation systems based on an analysis of a client's needs, site conditions and an understanding of hydraulics.

Contact Hours: 45 Contact Hours.

Recommended Preparation: HLT 150

HLT 260 - Plant Propagation (4)

Teaches seed and vegetative plant propagation techniques, the biology underlying modern plant propagation practices, and their application in commercial plant production.

Contact Hours: 90 Contact Hours.

Recommended Preparation: HLT 101

HLT 262 - Urban Farm Management (4)

Teaches the principles of crop selection, site management, harvesting and handling of vegetable and fruit crops in an intensive urban farm setting.

Contact Hours: 90 Contact Hours.

Recommended Preparation: HLT 101

HLT 280 - Internship ()

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 business location and with the direct guidance of the instructor/ coordinator.

Contact Hours: 135 contact hours.

HLT 287 - Cooperative Education ()

Provides students with the opportunity to supplement coursework with paid practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

Contact Hours: 135 contact hours.

HOS - Hospitality Culinary Arts Management

HOS 110 - Introduction to Hospitality (3)

Introduces learners to careers and the organization and structure of the Hospitality Industry including: hotels, restaurants, non-commercial food service, travel and tourism, conventions and meetings, clubs and other food service entities. Topics include exploring career opportunities, understanding the world of Hotels and Restaurants, Food Service Organizational structures, an introduction to the Meetings Industry, and analyzing the size and scope of the Noncommercial Foods segment.

Contact Hours: 45 Contact Hours.

HOS 120 - Service Management (3)

Describes the differences between managing and marketing services for hospitality students or those interested in service industries. The course focuses on understanding, analyzing, and measuring service, especially in the hospitality segment.

Contact Hours: 45 Contact Hours.

HOS 131 - Planning for Special Events (3)

Provides a basic knowledge of the planning and development of an event or meeting, including the budgeting, arranging of entertainment and catering, and the lodging of participants.

Contact Hours: 45 Contact Hours.

HOS 141 - Convention Management (3)

Prepares students for a management position in the convention industry. The course defines the scope and segmentation of the convention and group business market, describes marketing and sales strategies to attract markets with specific needs, and explains techniques to meet those needs as part of meeting and convention service. The class meets for a total of 45 hours. At the conclusion of the course, students will take a nationally recognized test from the Educational Institute of the American Hotel and Lodging Association.

Contact Hours: 45 Contact Hours.

HOS 210 - Event Finances (3)

Examines the concepts and techniques for maximizing event income including ticket fees, retail sales, grants, and sponsorships.

Contact Hours: 45 Contact Hours.

HOS 215 - Training and Development (3)

Teaches the principles, procedures, and skills needed to develop and maintain a competent staff. Learn to apply an easy, four-step training method to all hospitality functional areas.

Contact Hours: 45 Contact Hours.

HOS 242 - Hotel Sales and Marketing (3)

Focuses on the basic elements of sales, marketing, rooms merchandising, convention planning, and basic food and beverage knowledge. The course emphasizes the relationship between the sales philosophy, the guest, and the hotel.

Contact Hours: 45 Contact Hours.

HOS 251 - Hotel Operations (3)

Studies hotel operations covering such aspects as the hotel organization chart, job analysis and design, managing human resources, production and serving controls, calculating food and beverage costs, and telecommunication systems. Case problems provide the students the opportunity to develop control systems for food and lodging organizations and understand the hierarchy of career advancement in a hotel environment.

Contact Hours: 45 Contact Hours.

HOS 255 - Hospitality HR Management (3)

Studies the technical and legal challenges of hospitality human resource management from working within today's employment laws to controlling absenteeism, dealing with unions, handling discipline and termination, and creating affordable wages and benefit programs. Explores controlling costs, increasing motivation and productivity, and how to find and keep good employees .

Contact Hours: 45 Contact Hours.

HOS 280 - Internship (3)

Exposes the learner to the practical application of course studies in the hospitality industry. The course consists of practical experience in a hotel, restaurant, convention center, resort, tourism operation, or other professional opportunity in the hospitality industry.

Prerequisite: CUA 101 and HOS 110

Contact Hours: 135 Contact Hours.

HPE-Human-Performance-Exercise**HPE 100 - Introduction to Physical Education and Sport (2)**

Focuses on the field of physical education and sports. Includes trends, precedents and their effects in the health and total wellness of those involved.

Contact Hours: 30 Contact Hours.

HPE 231 - Care and Prevention of Athletic Injuries (3)

Focuses on techniques in prevention, care and basic rehabilitation of athletic injury.

Contact Hours: 52.5 Contact Hours.

HPR - Health Professional**HPR 100 - Introduction to Health (3)**

Provides an exploratory course for students interested in a health career. Basic health skills such as vital signs and CPR will be included.

Contact Hours: 45 Contact Hours.

HPR 101 - Customer Service in Healthcare (2)

Introduces students to customer service theory and techniques specifically in the healthcare arena. This course will discuss therapeutic communication, conflict resolution and negotiation, as well as employee/employer relations. Exploration of diverse populations and cultural sensitivity will be addressed.

Contact Hours: 30 Contact Hours.

HPR 102 - CPR for Professionals (0.5)

Meets the requirement for American Red Cross Professional Rescuer CPR or American Heart Association Basic Life Support for those who work in Emergency Services, Health Care and other professional areas. Material presented in the course is basic patient assessment, basic airway management, rescue breathing, and CPR for infant, children and adult patients.

Contact Hours: 7.5 Contact Hours.

HPR 104 - Health Careers, Options and Readiness (1)

Discusses current market trends in the medical profession, professional opportunities, continuing education, and professional affiliations. Discussions regarding resumes, portfolios, letters of inquiry, and interviewing techniques, as well as job search information is provided. This course is primarily informational and provides various aspects of career choices

Contact Hours: 15 Contact Hours.

HPR 106 - Law and Ethics for Health Professions (2)

Advances student knowledge in the study and application of medico-legal concepts in medical careers, establishes a foundation for ethical behavior and decision-making.

Contact Hours: 30 Contact Hours.

HPR 108 - Dietary Nutrition (1)

Studies the basic principles in clinical practice involved in the assistance of health care. The course will cover factors which influence the nutritional status of individuals, methods of nutritional assessment and support, and diet modification for specific diseases.

Contact Hours: 15 Contact Hours.

HPR 109 - Assisting with Medication Administration (1)

Addresses routine knowledge and information required by the Professional Household Health Assistant in attending the home-care patient. It is designed to provide information in support of the family and healthcare providers' directions in client self-administered medication in the home setting. It is not designed to teach administration techniques, calculations, or dispensing of drugs to the client in the home, but rather the support skills required in assisted facilitation of self-medication, storage of medications, and trained observation of the patient with monitoring/documentation of patient self-administered medications.

Contact Hours: 15 Contact Hours.

HPR 112 - Phlebotomy (4)

Teaches the duties associated with the practice of venipuncture, capillary puncture, and special collection procedures. Students will have experience with quality control, infection control and safety procedures as well as laboratory computer systems.

Prerequisite: CCR 092 or ENG 121

Contact Hours: 90 Contact Hours.

HPR 113 - Advanced Phlebotomy (4)

Instructs students in advanced phlebotomy techniques to include patients in trauma, neonatal, geriatric, and long term acute care areas. In addition, laboratory procedures taught include specimen processing and advanced point-of-care instrumentation. This course includes a lecture/lab combination that teaches theory and direct application of theoretic content and clinical opportunities for student to master learned skills.

Prerequisite: CCR 092 Corequisite: HPR 112

Contact Hours: 135 Contact Hours.

HPR 116 - Computers in Health Care (1)

Introduces the learner to the use of personal computer technology and the concepts of software applicable to health care. Basic features of selected software, terminology related to hardware, software and online resources (which include PC, word processing, e-mail) and electronic health-based research will be emphasized. Provides opportunities for practical applications of computer skills to nursing care.

Contact Hours: 22.5 Contact Hours.

HPR 117 - Anatomical Kinesiology (3)

Studies the anatomical bases of human movement.

Prerequisite: BIO 106 and either HPR 178 or HPR 208.

Contact Hours: 67.5 Contact Hours.

HPR 120 - Advanced Cardiac Life Support (ACLS) (1)

Presents the required material for ACLS completion. It will cover arrhythmia, medications, therapeutic modalities for life

threatening arrhythmia, airway management, and other treatment modalities used in cardiac and respiratory arrest.

Contact Hours: 22.5 Contact Hours.

HPR 130 - Pediatric Advanced Life Support (PALS) (1)

Provides students the needed information and skills as required by health care agencies for pediatric emergencies.

Contact Hours: 22.5 Contact Hours.

HPR 137 - Human Diseases (4)

Covers basic knowledge of the deviations that occur in the human body with disease and injury. An integrated study of signs/symptoms, diagnostic tests and treatment.

Prerequisite: BIO 106

Contact Hours: 60 Contact Hours.

HPR 175 - Special Topics (.5)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Contact Hours: 7.5 Contact Hours.

HPR 178 - Medical Terminology (1)

Introduces the student to the structure of medical terms with emphasis on using and combining the most common prefixes, roots and suffixes. Includes terms related to major body systems, oncology, psychiatry, as well as clinical laboratory and diagnostic procedures and imaging. Class structure provides accepted pronunciation of terms and relative use in the healthcare setting.

Contact Hours: 15 Contact Hours.

HPR 190 - Basic EKG Interpretation (2)

Provides instruction for interpretation of EKG strips, anatomy and physiology of the heart, using three-lead monitoring as a guide. Twelve-lead EKG may be discussed.

Contact Hours: 30 Contact Hours.

HPR 200 - Advanced EKG Interpretation (2)

Focuses on each wave and interval of the complex, the axis, and the 12-lead presentation of some rhythm disturbances.

Prerequisite: HPR 190

Contact Hours: 30 Contact Hours.

HPR 205 - Microbiology of Infectious Diseases (3)

Acquaints the student with microbes and their roles in infectious disease. It includes descriptions of bacteria, viruses, fungi, and protozoa; as well as techniques for growing, controlling and treating diseases caused by these organisms. Within the scope of this course are units which discuss how the diseases are diagnosed, and finally, epidemiology and communicability of individual diseases grouped by portals of entry. Prevention and infection control issues as well as current issues surrounding infectious disease may also be discussed.

Contact Hours: 45 Contact Hours.

HPR 208 - Medical Terminology For Health Professionals (2)

Demonstrates knowledge of medical terminology with emphasis on combining complex prefixes, roots and suffixes. Includes pathophysiology for major body systems. Includes terms related to diagnostic tools per body systems, as well as commonly used medical abbreviations. Applies medical terminology knowledge in interpreting the medical record.

Contact Hours: 30 Contact Hours.

HPR 232 - Disease Process and Treatment (5)

Covers disease processes and drug therapy used to treat commonly found pathological conditions. Normal anatomy and physiology of each body system is reviewed. Conditions that disrupt homeostasis are examined. Conditions considered are both acquired and congenital. Diagnostic methods, management, treatment modalities and prognosis are discussed. Classifications of drugs are introduced. A general understanding of the actions; absorption, metabolism and excretion; and reasons for use of various groups of pharmacologic agents are introduced.

Contact Hours: 90 Contact Hours.

HPR 275 - Special Topics (.5)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Contact Hours: 7.5 Contact Hours.

HPR 285 - Independent Case Study (1)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. Students are reminded that no more than six (6) credit hours of independent study may be applied to any associate degree program.

HUM - Humanities

HUM 103 - Introduction to Film Art (3)

Studies the relationships among film's stylistic systems, narrative systems and audience reception. Students view, discuss and critically analyze a variety of films which represent a variety of genres and themes. The course incorporates the vocabulary of stylistic systems (for instance, cinematography and editing) and narrative systems (for instance, story structure and character motivation) as both relate to the kinds of meanings a film conveys.

Offered: (GT-AH2).

Contact Hours: 45 Contact Hours.

HUM 115 - World Mythology (3)

Introduces students to a multidisciplinary approach to world mythology. Common themes are illustrated and connected to religion, philosophy, art, literature, music, and contemporary culture. In addition, students will study various ways of interpreting myth. This course is one of the Statewide Guaranteed Transfer courses. GT-AH2

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

HUM 121 - Early Civilizations (3)

Introduces students to the history of ideas that have defined cultures through a study of the visual arts, literature, drama, music, and philosophy. It emphasizes connections among the arts, values, and diverse cultures, including European and non-European, from the Ancient world to 1000 C.E. This course is one of the Statewide Guaranteed Transfer courses. GT-AH2

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

HUM 122 - From the Medieval to the Modern (3)

Examines written texts, visual arts and musical compositions to analyze and reflect the evolution and confluence of cultures in Europe, Asia and the Americas from 800 C.E. to 1750 C.E. Any two of the three Survey of Humanities courses equal a sequence. This course is one of the Statewide Guaranteed Transfer courses. GT-AH2

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

HUM 123 - The Modern World (3)

Examines the cultures of the 17th through the 20th centuries by focusing on the interrelationships of the arts, ideas, and history. Considers the influences of industrialism, scientific development and non-European peoples. This course is one of the Statewide Guaranteed Transfer courses. GT-AH2

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

HUM 164 - American Cinema (3)

Introduces film studies and surveys the American film industry as an art form, as an industry, and as a system of representation and communication. This course explores how Hollywood films work technically, aesthetically, and culturally to re-enforce and challenge America's national self image.

Contact Hours: 45 Contact Hours.

HUM 211 - Cultural Diversity-Humanities (3)

Introduces students to the various aspects of social and cultural diversity. Promotes development of critical thought and growth of multicultural, multisocial and multilingual understanding.

Contact Hours: 45 Contact Hours.

HVA-Heating-Ventilation-and-Air-Conditioning

HVA 101 - Introduction to Air Conditioning and Refrigeration (4)

Introduces school policies, safety procedures, and first aid. Use of trade tools and terminology is covered. Laboratory experiences include brazing, soldering, and material.

Contact Hours: 90 Contact Hours.

HVA 102 - Basic Refrigeration (4)

Introduces the basic theory of refrigeration systems, components, charging, recycling, and evacuation of refrigeration units.

Prerequisite: Prerequisite or Corequisite: HVA 101

Contact Hours: 90 Contact Hours.

HVA 103 - Basic Electricity (3)

Covers basic electrical AC and DC theory, including study of Ohm's Law and using electrical theory to explain operation of electrical devices.

Contact Hours: 67.5 Contact Hours.

HVA 104 - Electrical Components for Air Conditioning and Refrigeration (4)

Covers electrical power, distribution, transformers, capacitors, relays, and electric motors. Laboratory experiences consist of using electrical devices to control electrical loads.

Prerequisite: HVA 103. This course may be taken concurrently.

Contact Hours: 90 Contact Hours.

HVA 122 - Commercial Refrigeration (4)

Covers commercial icemakers, walk-in coolers, walk-in freezers, and self-contained refrigeration units.

Prerequisite: HVA 101, HVA 102, HVA 103, and HVA 104

Contact Hours: 90 Contact Hours.

HVA 123 - Air Conditioning (4)

Covers basic heating and air conditioning theory and service. Aspects covered include gas heat, electric heat, heat pumps, residential boiler systems, central air conditioning, and window air conditioners.

Prerequisite: HVA 101, HVA 102, HVA 103, and HVA 104

Contact Hours: 90 Contact Hours.

HVA 124 - Advanced Air Conditioning (4)

Covers design, installation, and testing of residential heating and cooling systems. Additional areas emphasized are duct design and sheet metal work.

Prerequisite: HVA 101 and HVA 102 and HVA 103 and HVA 104, and prerequisite or corequisite: HVA 123.

Contact Hours: 90 Contact Hours.

HVA 200 - International Residential Codes - Mechanical and Fuel Gas (2)

Covers the mechanical and fuel gas requirements of the International Residential Code. Students will be given the opportunity to learn and apply the general requirements of this code. The course will review and apply the sizing requirements of parts V and V1 of this code.

Prerequisite: HVA 101, HVA 102, HVA 103, and HVA 104.

Contact Hours: 30 Contact Hours.

HVA 201 - Heating for Commercial Applications (3)

Covers hydronic and steam heating systems, including steam, hot water and forced air-heating systems for commercial buildings.

Prerequisite: HVA 101, HVA 102, HVA 103, and HVA 104.

Contact Hours: 67.5 Contact Hours.

HVA 202 - Troubleshooting and Customer Service (3)

Covers field analysis of malfunctions on actual, in-house, heating, ventilation, refrigeration and air conditioning equipment. Customer interaction and diagnosis efficiency is stressed.

Prerequisite: HVA 101, HVA 102, HVA 103, and HVA 104

Contact Hours: 68 Contact Hours.

HVA 203 - Industrial Controls (3)

Covers both pneumatic and electrical/electronic control systems. Students learn installation, maintenance and calibration of controls. Laboratory experiences include troubleshooting of malfunctioning systems, calibration and typical installation of control systems.

Prerequisite: HVA 101, HVA 102, HVA 103, and HVA 104

Contact Hours: 67.5 Contact Hours.

HVA 247 - Hot Water Heating Systems (4)

Covers the theory of operation behind these systems, as well as installation, maintenance and repair. The course also examines air elimination, circulator pump and pipe sizing. Boiler and heat convector sizing are also discussed.

Prerequisite: HVA 101, HVA 102, HVA 103, and HVA 104.

Contact Hours: 90 Contact Hours.

HVA 280 - Internship (1)

Gives the students an opportunity to apply their course studies in a specific area.

Prerequisite: HVA 102 and HVA 104.

Contact Hours: 45 Contact Hours.

HVA 289 - Capstone (1)

Demonstrates culmination of learning within a given program of study.

Contact Hours: 45 Contact Hours.

HWE - Health Wellness Education**HWE 100 - Human Nutrition (3)**

Introduces basic principles of nutrition with emphasis on personal nutrition. Satisfies nutrition requirement of students entering health care professions. Transfers to most four-year colleges.

Contact Hours: 45 Contact Hours.

HWE 103 - Community First Aid and CPR (1)

Uses demonstration videos, instructor led practice and workbook / textbook study to prepare for certification in Adult/Child/Infant CPR and First Aid.

Contact Hours: 15 Contact Hours.

HWE 106 - Infant & Child CPR/First Aid (0.5)

Emphasis on the skills needed to recognize and respond confidently and calmly to childhood emergencies and to help prevent childhood accidents. Topics include primary assessment, airway obstructions, infant and child CPR, control of bleeding, illness assessment, sudden illness, motor vehicle safety, injury assessment, burns, fractures, wounds, child abuse, hypothermia and communication.

Contact Hours: 8 Contact Hours.

HWE 108 - Weight Loss (1)

Focuses on combining a healthy diet and exercise to shed unwanted pounds and inches. The course will include classroom sessions that will focus on personal habits including diet that lead to weight gain and exercise session in the fitness center.

Contact Hours: 15 Contact Hours.

HWE 109 - Weight Management and Exercise (2)

Offers guided instruction in weight management and exercise to students interested in learning more about weight control. Emphasis is placed on the development of weight management programs, review of current trends and diets, essential nutrients, eating disorders, special populations, and the role of exercise in weight management.

Contact Hours: 45 Contact Hours.

HWE 110 - Fitness Conditioning and Wellness (2)

Provides the proper techniques and guidelines for a student to develop a personal lifetime program that improves fitness and promotes preventive care and personal wellness. In addition, this course offers instruction in cardiovascular endurance, muscular strength and endurance training, flexibility training, and body composition management to meet individual needs.

Contact Hours: 45 Contact Hours.

HWE 112 - Health & Wellness for the Elderly (3)

Helps the student become familiar with the field of health and wellness for the elderly population. The foundations of health and wellness will be explored as well as the skills and resources needed to assist the elderly in being more proactive in their healthcare practices.

Contact Hours: 45 Contact Hours.

HWE 113 - First Aid and Adult CPR (0.5)

Teaches the recognition and care for breathing and cardiac emergencies for victims 8 years old and up; identify and care for life-threatening bleeding, sudden illness and injuries. American Red Cross certification in Adult CPR and Standard First Aid is available for students meeting those requirements.

Contact Hours: 7.5 Contact Hours.

HWE 121 - Wilderness First Aid (2)

Provides more advanced wilderness care for the First Responder or EMT provider.

Contact Hours: 45 Contact Hours.

HWE 122 - Responding to Emergencies (2)

Provides standard first aid and CPR, with a more in depth look at sudden illness, specific disease, and emergencies.

Contact Hours: 30 Contact Hours.

HWE 124 - Fitness and Wellness (2)

Provides information on fitness and wellness and to serve as a guide to design, implement, and evaluate a complete personal fitness and wellness program. The course integrates the basic components of fitness and wellness in understanding human health in order to achieve wellbeing. This course offers current information in the health field and provides self-assessments for health risks and wellness behaviors. This includes lifestyle modification, nutrition, weight management, stress management, cardiovascular and cancer risk reduction, exercise and aging, exercise related injury, exercise and the environment, prevention of sexually transmitted diseases, substance abuse (including tobacco, alcohol and other psychoactive drugs), and analysis and interpretation of research publications and websites in health and wellness.

Contact Hours: 30 Contact Hours.

HWE 129 - Wilderness First Responder (2)

Provides the student with those skills and emergency medical care techniques used by guides, trip leaders and others providing primary care in backcountry setting. The student will be able to respond correctly to those medical and trauma situations commonly encountered when entry into the EMS system is delayed or unlikely.

Contact Hours: 30 Contact Hours.

HWE 140 - Nutrition in Pregnancy (1)

Covers the basic nutrition principles during pregnancy and lactation. Focuses on normal pregnancy, gestational diabetes, normal lactation, common problems in breast feeding.

Contact Hours: 15 Contact Hours.

HWE 141 - Infant Nutrition (1)

Covers the basic nutrition principles during birth-18 months. Examines breastfeeding/bottle feeding nutrition and techniques; introduction of solid foods, weaning from breast feeding or bottle feeding, transitioning to table foods and cup usage. Discusses common nutritional problems of the infant: special needs of the preterm infant, failure to thrive, diarrhea, poor eating, anemia, allergies.

Contact Hours: 15 Contact Hours.

HWE 142 - Toddler/Preschool Nutrition (1)

Covers the basic nutrition principles for the toddler to preschooler. Emphasizes nutrition during health and illness. Focuses on the "Feeding Relationship".

Contact Hours: 15 Contact Hours.

HWE 237 - Exercise, Nutrition & Body Composition (3)

Discusses the concepts of improved performance in all fitness areas. Emphasis is placed upon updated information associated with nutrition and human performance. Measurement of body composition is used as it correlates to training and diet/exercise programs.

Prerequisite: HWE 100

Contact Hours: 45 Contact Hours.

HWE - Health Wellness Education**HWE 100 - Human Nutrition (3)**

Introduces basic principles of nutrition with emphasis on personal nutrition. Satisfies nutrition requirement of students entering health care professions. Transfers to most four-year colleges.

Contact Hours: 45 Contact Hours.

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Offers guided instruction in weight management and exercise to students interested in learning more about weight control. Emphasis is placed on the development of weight management programs, review of current trends and diets, essential nutrients, eating disorders, special populations, and the role of exercise in weight management.

Contact Hours: 45 Contact Hours.

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Provides the proper techniques and guidelines for a student to develop a personal lifetime program that improves fitness and promotes preventive care and personal wellness. In addition, this course offers instruction in cardiovascular endurance, muscular strength and endurance training, flexibility training, and body composition management to meet individual needs.

Contact Hours: 45 Contact Hours.

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Helps the student become familiar with the field of health and wellness for the elderly population. The foundations of health and wellness will be explored as well as the skills and resources needed to assist the elderly in being more proactive in their healthcare practices.

Contact Hours: 45 Contact Hours.

HWE 113 - First Aid and Adult CPR (0.5)

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Contact Hours: 15 Contact Hours.

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Covers the basic nutrition principles during birth-18 months. Examines breastfeeding/bottle feeding nutrition and techniques; introduction of solid foods, weaning from breast feeding or bottle feeding, transitioning to table foods and cup usage. Discusses common nutritional problems of the infant: special needs of the preterm infant, failure to thrive, diarrhea, poor eating, anemia, allergies.

Contact Hours: 15 Contact Hours.

HWE 142 - Toddler/Preschool Nutrition (1)

Covers the basic nutrition principles for the toddler to preschooler. Emphasizes nutrition during health and illness. Focuses on the "Feeding Relationship".

Contact Hours: 15 Contact Hours.

HWE 237 - Exercise, Nutrition & Body Composition (3)

Discusses the concepts of improved performance in all fitness areas. Emphasis is placed upon updated information associated with nutrition and human performance. Measurement of body composition is used as it correlates to training and diet/exercise programs.

Prerequisite: HWE 100

Contact Hours: 45 Contact Hours.

IND - Interior Design**IND 105 - Introduction to Interior Design (3)**

Introduces design awareness, color, and the elements of style in this overview of the interior design industry. Focus is on design awareness and creative problem solving while studying various facets related to interiors.

Contact Hours: 67.5 Contact Hours.

IND 107 - History of Interior Design (3)

Offers a study of interiors and furnishings from the medieval period to the Revival styles of the mid-eighteenth century to the contemporary classics used in modern interiors today. Study of interior and exterior architectural elements, furniture, design motifs and ornamentation, fine arts and construction methods as it relates to the cultural, political, social, technological and economic conditions of the times.

Contact Hours: 67.5 Contact Hours.

IND 113 - Perspective & Rendering Techniques (3)

Teaches visual communication techniques, methods of communicating interior design plans, ideas and elements using sketching, 2D and 3D drawing and renderings. Emphasis is placed on 2D and 3D perspective drawings, illustrations and renderings.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: ART 121 IND 105

IND 114 - Space Planning (3)

Teaches the principles and factors of space planning, and practice the space planning process through residential and light commercial applications. Students are introduced to interior architecture. Use of bubble diagrams and freehand ink presentation techniques are also included.

Prerequisite: AEC 101

Contact Hours: 67.5 Contact Hours.

IND 120 - Interior Design II - Space Planning and Human Factors (3)

Develops awareness of human dimensions, special relationships, and the importance of the physical and psychological characteristics of people. Studies include residential and commercial spaces and Americans with Disabilities Act factors.

Prerequisite: IND 114

Contact Hours: 67.5 Contact Hours.

IND 200 - Kitchen and Bath Design I (4)

Provides the specialized design process and documentation requirements of kitchen and bath design and applies National Kitchen and Bath Association guidelines. Students become familiar with trade resources supporting the design field. At least two portfolio projects are produced. Students will be encouraged to produce project documents using a variety of computer software applications.

Contact Hours: 90 Contact Hours.

IND 205 - Professional Practice (2)

Introduces processes involved in creating and running a professional interior design business including legal, ethical, practical and professional requirements. Emphasis on business structures and practices, professional documentation and contracts, marketing techniques, job cost estimating, setting up industry accounts and project management methods. Students become familiar with business practices in both commercial and residential design firms and develop business plans and resumes.

Prerequisite: IND 200

Contact Hours: 45 Contact Hours.

IND 213 - Portfolio Presentations (3)

Prepares the student for the industry by refining presentation skills and completing a portfolio for employment. Students learn to manipulate software renderings, hand-drafted renderings, model building, and interior finish presentation boards to develop a digital and hard-copy portfolio for selling design through presentation. The student will learn various techniques for time management and time-saving skills for graphic communication.

Prerequisite: IND 120 and CAD 115 Corequisite: IND 120 and CAD 115

Contact Hours: 67.5 Contact Hours.

IND 220 - Interior Design III - Materials, Details, Codes, & Specs (3)

Coordinates interior building materials, interior details, and section drawings, building codes and specifications for typical and custom projects, and the ability to communicate custom designed furnishings specifications.

Prerequisite: IND 120

Contact Hours: 67.5 Contact Hours.

IND 225 - Lighting Design (3)

Teaches and applies basic knowledge of interior lighting technology and design. Content includes lamp classifications, color rendition, how lighting sources effect our perception of space, how to compute and control proper lighting levels, and how to communicate design information by means of a reflected ceiling plan and luminaire schedule. Students will be encouraged to produce projects using a variety of computer software applications.

Prerequisite: IND 114

Contact Hours: 67.5 Contact Hours.

IND 231 - Sustainable Design (3)

Creates awareness and understanding in ecological issues emphasizing the use of environmentally-friendly materials and resources without compromising the effectiveness of the design. It also investigates the practice of design to reduce the effects on the environment using renewable materials into the design and building for both, residential and commercial. Its emphasis is to conserve resources and reduce the negative impact on the environment.

Prerequisite: IND 114

Contact Hours: 67.5 Contact Hours.

IND 261 - Advanced Kitchen and Bath Design (4)

Continues Kitchen and Bath Design instruction while participating in the National Kitchen and Bath Association (NKBA) Student Design Competition for 1 bathroom and 1 kitchen remodel. Students will use NKBA Graphic Standards and Planning Guidelines to facilitate 2 sets of drawings, 2 materials boards, and 1 estimate and contract for the projects.

Prerequisite: IND 200

Contact Hours: 90 Contact Hours.

IND 280 - Internship (4)

Provides work experience in a business or industry; 45 fieldwork hours per credit hour. Students must have a GPA of 3.0 to enroll in the Internship course.

Prerequisite: IND 200

Contact Hours: 180 Hours.

IPP - Interpreter Preparation**IPP 115 - Introduction to Language and Communication (3)**

Enables sign language interpreting students to establish a foundation of linguistic and metalinguistic skills. Students will study the complexities of English and analyze semantic and discourse level considerations within mainstream American

culture. Students will also have an opportunity to identify strengths and weaknesses in their own fluency in English.

Prerequisite: ENG 121 Corequisite: IPP 121

Contact Hours: 45 Contact Hours.

IPP 121 - Aspects of Interpreting I (3)

Acquaints the student with the basics of interpreting. This will enable the student to understand what interpreting involves and the professional requirements for being an interpreter. The student is introduced to the role of the interpreter, the code of professional conduct, situation assessment required for effective interpreting, and certification for interpreters.

Prerequisite: ASL 122 Corequisite: IPP 115 unless this class has already been taken.

Contact Hours: 45 Contact Hours.

IPP 122 - Aspects of Interpreting II (3)

Provides a more in-depth study of the field of interpreting expanding on the basics introduced in IPP 121. Lecture/discussion sessions will address ethical decision-making and cultural issues, as well as the various settings in which interpreters work. Students will have opportunities to observe various professional interpreters throughout the semester.

Prerequisite: IPP 121 Corequisite: ASL 221 unless this class has already been taken.

Contact Hours: 45 Contact Hours.

IPP 125 - Oral Transliterating (2)

Provides the student with the opportunity to develop basic oral communication facilitation skills. The course allows the student the advantage of learning the different techniques in rendering effective oral communication facilitation between consumers.

Prerequisite: IPP 121 Corequisite: IPP 121

Contact Hours: 30 Contact Hours.

Recommended Preparation: IPP 135 (p. 196)

IPP 135 - Introduction to Interpreting (3)

Provides the student with an analysis of interpretation theory and the development of processing skills that will be applied to consecutive interpretation.

Prerequisite: ASL 123 and IPP 121 Corequisite: ASL 221 and IPP 122.

Contact Hours: 45 Contact Hours.

IPP 145 - Deaf People in Society (2)

Expands the student's knowledge of the impact of deafness on the development of language and cognition and the socialization of deaf individuals in a hearing world.

Prerequisite: ANT 101 Corequisite: ASL 221 and IPP 147.

Contact Hours: 30 Contact Hours.

IPP 147 - Survey of Deaf Culture (3)

Surveys the factors that contribute to defining Deaf persons as members of a cultural minority. The course will look at the impact of language on the culture as well as the role of norms, values, traditions, and minority groups within Deaf Culture. Attention will also be given to identity and membership in Deaf Culture.

Prerequisite: ANT 101 Corequisite: ASL 221 and IPP 145.

Contact Hours: 45 Contact Hours.

IPP 205 - Educational Interpreting (4)

Helps students gain insight into the roles of the interpreter/tutor in the mainstream environment, and to recognize the implications of child development and classroom interaction patterns on interpreting. Students also discuss tutoring strategies.

Prerequisite: ASL 221 and IPP 122. Corequisite: ASL 244

Contact Hours: 60 Contact Hours.

IPP 225 - English to ASL Interpreting (3)

Provides the student an opportunity to further develop interpreting skills from English to ASL.

Prerequisite: ASL 221, IPP 122 and IPP 135. Corequisite: ASL 222 and IPP 227.

Contact Hours: 45 Contact Hours.

IPP 227 - ASL to English Interpreting (3)

Provides the student an opportunity to build skills in interpreting and transliterating into spoken English from ASL and various contact varieties.

Prerequisite: ASL 221, IPP 122 and IPP 135 Corequisite: ASL 222 and IPP 225.

Contact Hours: 45 Contact Hours.

IPP 229 - Transliterating (3)

Provides the student with knowledge of transliterating techniques and to develop skills in transliterating spoken English into signed English. The student is introduced to the concept of transliterating and the differences in transliterating and interpreting.

Prerequisite: ASL 221, IPP 122 and IPP 135.

Contact Hours: 45 Contact Hours.

IPP 235 - Advanced Interpreting (4)

Provides the student with an opportunity to further develop and refine skills in ASL to English and English to ASL interpretation and transliteration.

Prerequisite: ASL 222, IPP 225, IPP 227 and IPP 229. Corequisite: IPP 278 and IPP 282.

Contact Hours: 60 Contact Hours.

IPP 278 - Interpreter Seminar (2)

Provides the student with an open forum to discuss situations arising from interpreter assignments during internship and an opportunity to prepare for entering the interpreting field.

Prerequisite: ASL 222, IPP 225, IPP 227 and IPP 229. Corequisite: IPP 235 and IPP 282.

Contact Hours: 30 Contact Hours.

IPP 282 - Internship (6)

Provides field experience interpreting in a supervised educational, community, service agency, or other setting.

Prerequisite: IPP 205, IPP 225, IPP 227 and IPP 229. Corequisite: IPP 235 and IPP 278.

Contact Hours: 270 Contact Hours.

ITA - Italian

ITA 101 - Conversational Italian I (3)

Provides the first course in a sequence for beginning students who wish to understand and speak Italian. The material includes basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

Contact Hours: 45 Contact Hours.

ITA 102 - Conversational Italian II (3)

Provides the second course in a sequence for students who wish to understand and speak Italian. The material continues to cover basic conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ITA 101 or equivalent.

ITA 111 - Italian Language I (5)

Develops students' interpretive, interpersonal, and presentational communicative abilities in the language. Integrates these skills in the cultural contexts in which the language is used. Offers a foundation in the analysis of culture.

Contact Hours: 75 Contact Hours.

ITA 112 - Italian Language II (5)

Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.

Contact Hours: 75 Contact Hours.

Recommended Preparation: ITA 111 or equivalent.

ITA 201 - Conversational Italian III (3)

Presents the third course in a sequence for students who wish to continue their study of understanding and speaking Italian. The material includes intermediate level vocabulary, grammar, and expressions.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ITA 102 or equivalent.

ITA 202 - Conversational Italian IV (3)

Presents the fourth course in a sequence for students who wish to continue their study of understanding and speaking Italian. The material continues to cover intermediate level conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: ITA 201 or equivalent.

ITA 211 - Italian Language III (3)

Continues Italian language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the Italian language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

Recommended Preparation: ITA 112 or equivalent.

ITA 212 - Italian Language IV (3)

Continues Italian language I, II, and III in the development of increased functional proficiency in listening, speaking, reading and writing the Italian language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

Recommended Preparation: ITA 211 or equivalent.

JOU - Journalism

JOU 105 - Introduction to Mass Media (3)

Places the mass media in an historical and cultural perspective, and considers the validity, integrity and influence of the media in a democracy.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

JOU 106 - Media News and Reporting (3)

Introduces news writing, reporting and interviewing with emphasis on clarity, accuracy, completeness, timeliness and fairness.

Contact Hours: 45 Contact Hours.

Recommended Preparation: JOU 105.

JOU 121 - Photojournalism (3)

Develops photojournalistic skills in capturing moments of real life from a unique personal viewpoint. Covers a broad overview of new media story-telling techniques. Students will focus on the way they observe the world around them and on the content and quality of their photographs.

Contact Hours: 45 Contact Hours.

Photojournalism students must have regular access to a digital SLR camera with a 35mm f/2.8 lens or a 50mm f/2.8 lens. The camera should permit full manual control over aperture, shutter speeds, film speed settings (ISO or ASA), and focus. An automatic "point and shoot" camera will not meet the course requirements.

JOU 215 - Publications Production and Design (3)

Provides for student participation in the planning, writing, design and production processes of a non-newspaper publication.

Contact Hours: 67.5 Contact Hours.

JOU 221 - Newspaper Design I (3)

Provides students with experience in news writing, editing, design, layout and advertising for newspaper production. Students may be required to work on the college newspaper or other news-oriented publication.

Contact Hours: 45 Contact Hours.

Students should obtain permission from the instructor before registering for this class.

JOU 225 - New Media (3)

Explores techniques and approaches in the latest delivery methods for internet-based journalism. Students explore digital media outlets such as blogs, audio and video podcasts, e-zines and social networks. Students create journalistic pieces for internet-based media, focusing on best journalistic practices, ethics of internet media, and technology emergence affecting digital journalism. Concepts in video production, photography, writing, sourcing, editing and relevant skills necessary for the citizen journalist are introduced. Students create components for online news dissemination.

Contact Hours: 45 Contact Hours.

JOU 241 - Feature and Magazine Writing (3)

Studies trade, consumer and technical markets, as well as manuscript development with an emphasis on nonfiction, submission techniques, and trends affecting the marketing of manuscripts.

Prerequisite: JOU 105 and JOU 106.

Contact Hours: 45 Contact Hours.

JPN - Japanese

JPN 101 - Conversational Japanese I (3)

Introduces beginning students to conversational Japanese and focuses on understanding and speaking Japanese. Covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

Contact Hours: 45 Contact Hours.

JPN 102 - Conversational Japanese II (3)

Continues the sequence for students who wish to understand and speak Japanese. Covers basic conversational patterns, expressions and grammar.

Contact Hours: 45 Credit Hours.

Recommended Preparation: JPN 101 (p. 198) with grade of "C" or better

JPN 111 - Japanese Language I (5)

Introduces a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the Japanese language.

Contact Hours: 75 Contact Hours.

The order of the topics and methodology will vary according to individual texts and instructors.

JPN 112 - Japanese Language II (5)

Continues Foreign Language I in the development of functional proficiency in listening, speaking, reading and writing the Japanese language.

Contact Hours: 75 Contact Hours.

Recommended Preparation: JPN 111 with grade of "C" or better

JPN 211 - Japanese Language III (3)

Continues Japanese language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the Japanese language. Note: The order of the topics

and the methodology will vary according to individual texts and instructors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

Recommended Preparation: JPN 112

JPN 212 - Japanese Language IV (3)

Continues Japanese language I, II, and III in the development of increased functional proficiency in listening, speaking, reading and writing the Japanese language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

Recommended Preparation: JPN 211

LIT - Literature

LIT 115 - Introduction to Literature I (3)

Introduces students to fiction, poetry, and drama. Emphasizes active and responsive reading.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

LIT 125 - Study of the Short Story (3)

Focuses on careful reading and interpretation of the short story as a distinct genre. It examines formal as well as thematic elements of short fiction. Critical thinking, discussion, and writing about short stories will enhance perceptive reading skills and heighten awareness of the human condition.

Contact Hours: 45 Contact Hours.

LIT 201 - World Literature to 1600 (3)

Examines significant writings in world literature from the ancients through the Renaissance. Emphasizes careful readings and understanding of the works and their cultural backgrounds.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 202 - World Literature After 1600 (3)

Examines significant writings in world literature from the 17th century to the present. Emphasizes careful reading and understanding of the works and their cultural backgrounds.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 205 - Ethnic Literature (3)

Focuses on significant texts by ethnic Americans including African American, Native American, Latino/a, and Asian American writers. Emphasizes careful reading and understanding of the cultural and literary elements of the works.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 211 - American Literature to the Civil War (3)

Provides an overview of American literature from the Native Americans through the 19th century Romantics. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 212 - American Literature After the Civil War (3)

Provides an overview of American literature from the mid-19th century to the present. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 221 - British Literature to 1770 (3)

Provides an overview of British literature from the Anglo-Saxon period through the 17th century. The course explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 222 - British Literature Since 1770 (3)

Provides an overview of British literature from the 18th century to the present. The course explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 225 - Introduction to Shakespeare (3)

Explores a selection of works by William Shakespeare. It focuses on careful reading and interpretation of the plays and poems, includes pertinent information about Elizabethan England, and examines formal as well as thematic elements of the selected works.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 235 - Science Fiction (3)

Examines the techniques and issues of science fiction through a close reading of a variety of writers in the genre.

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 238 - Introduction to Modern Poetry (3)

Demonstrates how modern poetry works, what it means, and how history, imagination and language are used in the act of poetic creation.

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 245 - Literature of the American West (3)

Examines works in various genres by writers of the American West. It investigates the dominant themes and social and historical backgrounds.

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 246 - Literature of Women (3)

Examines the techniques and themes in literature by and about women by examining women's issues from various genres.

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 248 - Native American Literature (3)

Examines oral and written literature created by Native American Peoples. Emphasizes narrative and ceremonial literature from the oral tradition. Examines oratory, autobiography, essays, poetry, short stories, and novels as oral and written forms.

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 255 - Children's Literature (3)

Evaluates the criteria for selecting appropriate literature for children through exploration of genres, age levels, values taught through literature, and the literary and artistic quality of various texts.

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 257 - Literature and Film (3)

Examines the relationship between literature and motion pictures, emphasizing the technique and interpretive function of filmmakers.

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 259 - Survey of African American Literature (3)

Examines African American literature from 1750 to the present, exploring ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115

LIT 267 - The Bible as Literature (3)

Introduces the Bible as the textual centerpiece of Western literature. Students will encounter the various literary genres represented in Biblical texts, the process of canonization, ways in which the Bible has been read by its various interpretive communities, and some impacts of the Bible in such areas as law, poetry, fiction, psychology, ethics, and theology.

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

LIT 268 - Celtic Literature (3)

Exposes the student to Irish literature. The course examines significant writings in Irish literature from the ancients through to the twenty-first century. The course emphasizes the careful reading and understanding of the works of poetry, fiction, and drama, as well as their cultural backgrounds.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH2).

Contact Hours: 45 Contact Hours.

Recommended Preparation: LIT 115.

MAC - Machining Technology

MAC 100 - Machine Shop Safety (1)

Covers the hazards of a machine shop including health and safety, locating essential safety information from a code or other standard, location and use of safety and emergency equipment, and identifying and applying shop safety procedures.

Contact Hours: 15 Contact Hours.

MAC 101 - Introduction to Machine Shop (3)

Covers safety procedures, use of bench tools, layout tools, power saws, drill presses, precision measurement tools, and various hand tools related to the machine shop. Also included are sharpening drill bits and general purpose turning tools for the lathe and determining speeds and feeds for both the lathe and the milling machine.

Prerequisite: MAC 100 and MAT 108. (Students who test at equivalent competency to MAT 108 may take a challenge exam

to receive course credit.) Corequisite: MAC 100 and MAC 108 may be taken concurrently.

Contact Hours: 67.5 Contact Hours.

MAC 102 - Print Reading for Machinists (3)

Instructs students in reading and understanding industrial prints. This course covers basic drafting and print standards, fundamentals of shape description, fundamentals of size description and annotation, industrial drawing types, and specialized parts and prints. Symbol interpretation, tolerancing and dimensioning standards are also covered.

Prerequisite: MAT 108. (Students who test at equivalent competency to MAT 108 may take a challenge exam to receive course credit.) Corequisite: MAT 108 may be taken concurrently.

Contact Hours: 67.5 Contact Hours.

MAC 110 - Introduction to Engine Lathe (3)

Introduces basic lathe applications which will consist of identifying lathe components and controls, understanding turning safety, calculating speeds and feeds, using various tools and tool holders, identifying basic tool geometry, and the use of common lathe spindle tooling. Students will perform basic lathe operations, which will consist of facing, center-drilling, chuck turning, turning between centers, boring, grooving, tapers, knurling, and single point threading. Students will be required to produce specified parts to a tolerance of +/- .004 in. and perform competencies set by manufacturing standards.

Prerequisite: MAC 100, MAC 101, MAC 102 and MAT 108. (Students who test at equivalent competency to MAT 108 may take a challenge exam to receive course credit.)

Contact Hours: 67.5 Contact Hours.

MAC 120 - Introduction to Milling Machine (3)

Teaches students to identify the major parts of the vertical mill, align a vise, use an indicator, edge finder, and boring head, determine speeds and feeds perform simple indexing, mill flat, square surfaces and slots, drill, bore, and tap holes, and work within a plus or minus .002 inch tolerance.

Prerequisite: MAC 100, MAC 101, MAC 102 and MAT 108. (Students who test at equivalent competency to MAT 108 may take a challenge exam to receive course credit.)

Contact Hours: 67.5 Contact Hours.

MAC 138 - Machine Tools (3)

Introduces the use of basic hand tools, metal working machines, and common mechanical hardware found in an industrial or manufacturing setting. Practical aspects include safety procedures, hands-on use of machining lathes, mills, saws, and bench tools. Students will learn about piping materials, pumps, gears, bearings, and how to align shafts. Basic blue print reading review and drawing nomenclature for fasteners and threads will be covered. Welding, soldering and piping and their applications will be covered.

Prerequisite: MAC 100 and MAT 108. (Students who test at equivalent competency to MAT 108 may take a challenge exam to receive course credit.) Corequisite: MAC 100 and MAT 108 may be taken concurrently.

Contact Hours: 67.5 Contact Hours.

MAC 201 - Intro to CNC Turning Operations (3)

Covers computer numerical control (CNC) lathe operations, control functions, the letter address system, the program format, and machine setup. G M codes, control functions, the letter address system, and math issues related to CNC are included. This class is NOT offered on an open-entry, open-exit basis.

Prerequisite: MAC 100, MAC 101, MAC 102, MAC 110, MAC 120 and MAT 108. (Students who test at equivalent competency to MAT 108 may take a challenge exam to receive course credit.)

Contact Hours: 67.5 Contact Hours.

MAC 205 - Intro to CNC Milling Operations (3)

Provides transitional information between conventional machining applications and the typical applications found in Computer Numerical Control Machining. Topics may consist of Numerical Control Systems, The Cartesian Coordinate System, High Efficiency Tooling Applications, Objectives of Numerical Control, Calculating Speed and Feed Rates, Defining and Calculating Tool Motion, Fixturing Requirements, Basic Program Structure, Programming Codes, and Basic Conversational Programming. Operations of NC machines will be required.

Prerequisite: MAC 100, MAC 101, MAC 102, MAC 110, MAC 120 and MAT 108. (Students who test at equivalent competency to MAT 108 may take a challenge exam to receive course credit.)

Contact Hours: 67.5 Contact Hours.

MAC 240 - CAD/CAM 2D (3)

Provides the student with the essential concepts and techniques that are required to successfully create part geometry, generate tool path, verify tool path models, and post process the NC codes. The student will be exposed to a 2-axis machining, 3-axis machining wire frame and surface modeling, lathe programming, and DNC systems. Programming projects and models will be demonstrated in the CNC manufacturing lab.

Prerequisite: MAC 201 and MAC 205

Contact Hours: 67.5 Contact Hours.

MAC 245 - CAD/CAM 3D (3)

Covers both the production and surfacing of three-dimensional geometry in a self-paced setting. Issues will be covered related to the production of wire frames, solids, surfaces, the joining of surfaces, joining of solids, managing construction planes, sweeping, rotating, and controlling parameter settings. A familiarity with Mastercam, CNC programming techniques, and CNC operations is recommended.

Prerequisite: MAC 201 and MAC 205.

Contact Hours: 67.5 Contact Hours.

MAN - Management**MAN 103 - Managing Business Change (1)**

Explores how change in the workplace affects employees and customers. A description of how cultures promote behaviors will be presented. The changing roles of men and women and their impact on the workplace will be discussed and analyzed.

Contact Hours: 15 Contact Hours.

MAN 105 - Logistics Management (3)

Explores the logistic system from in-bound movement of materials and freight into the organization, through physical distribution of the completed product to the consumer. Transportation systems, government regulations, material handling, inventory management, and distribution centers are covered.

Contact Hours: 45.

MAN 116 - Principles of Supervision (3)

Studies 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 supervision. Course content focuses on the human interaction in supervision.

Contact Hours: 45 Contact Hours.

MAN 117 - Time Management (1)

Provides students with the conceptual knowledge and tools to make better use of their time in the management function.

Contact Hours: 15 Contact Hours.

MAN 125 - Team Building (1)

Introduces the concept of working as team member. Activities and assignments will emphasize the ability to negotiate, work together, build consensus and make quality decisions.

Contact Hours: 15 Contact Hours.

MAN 128 - Human Relations in Organizations (3)

Explores the importance of effective communication 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.

Contact Hours: 45 Contact Hours.

MAN 160 - Entrepreneurship (3)

Teaches entrepreneurs planning skills from business concept development to the actual development of a comprehensive business plan. This practical approach includes one-on-one counseling with the instructor and professional volunteer counselors. Guest speakers are an integral part of the course. Topics include marketing strategies and tactics, profitability, human resource management, financial management and projections, innovations, and loan negotiations.

Contact Hours: 45 Contact Hours.

MAN 200 - Human Resources Management I (3)

Provides the student with a broad overview of 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.

Contact Hours: 45 Contact Hours.

MAN 201 - Human Resources Management II (3)

Offers further discussion of concepts of Human Resources. Topics covered include techniques and procedures in resources planning, appraising performance, selection and staffing, training and development, job enrichment, and wage and salary administration.

Prerequisite: MAN 200

Contact Hours: 45 Contact Hours.

MAN 205 - Event Planning (3)

Presents the components of meeting planning; organization, personnel, finances, site selection, transportation, program design, promotion, arranging exhibits and evaluations.

Contact Hours: 45 Contact Hours.

MAN 212 - Negotiation and Conflict Resolution (3)

Presents proper techniques in negotiation and conflict resolution. Key practices that determine successful negotiation are explored. This course covers principles of conflict resolution including business policies, accepted business practices contracts, labor union contracts, pay raises and starting salaries.

Contact Hours: 45 Contact Hours.

MAN 215 - Organizational Behavior (3)

Examines the behavior of groups and individual members of organizations and how that behavior can be influenced. Course emphasis is on the tools managers use to achieve organizational effectiveness.

Contact Hours: 45 Contact Hours.

MAN 216 - Small Business Management (3)

Examines the elements necessary for the successful formation of a new small business. It is also designed to enhance the skills of those already involved in the operation of a small business. The course includes the development of a complete small business plan.

Contact Hours: 45 Contact Hours.

MAN 224 - Leadership (3)

Focuses on leadership skills necessary to bring about change in an organization. Students learn to develop and communicate a shared vision, to empower employees, to manage conflict, to negotiate, and to develop organizations so that all are working toward common goals.

Contact Hours: 45 Contact Hours.

MAN 225 - Managerial Finance (3)

Examines the concepts and techniques used to analyze financial accounting information for managerial planning, decision-making and control. The focus of the course is on decision-making relating to the areas of budgets, forecasts, cost volume production, Return on Investment (ROI) and financial statements.

Contact Hours: 45 Contact Hours.

MAN 226 - Principles of Management (3)

Presents a survey of the principles of management. Emphasis is on the primary functions of planning, organizing, leading and controlling with a balance between the behavioral and operational approach.

Contact Hours: 45 Contact Hours.

MAN 230 - Corporate Ethics & Social Resp (3)

Examines the concept of corporate responsibility to the extent of which an organization's resources should be used to identify and respond to social and ethical problems. Included in the course will be topics of corporate and social responsibility, and the

concept of servant leadership, and how this applies to business and management principles.

Contact Hours: 45 Contact Hours.

MAN 240 - Strategic Management (3)

Presents the development of business policy and the integration of skills learned in prior business study, including strategy formulation, implementation and evaluation. Focus is on the coordination of marketing, production, finance, accounting, and ethics and social responsibility to achieve competitive advantage.

Contact Hours: 45 Contact Hours.

MAN 241 - Project Management in Organizations (3)

Introduces students to the planning, implementation and control activities of project management, including project and performance evaluation, quality control and workflow analysis. Emphasis will be on the initiating, planning, executing, controlling and closing activities of Project Management.

Contact Hours: 45 Contact Hours.

MAN 242 - Project Management Tools and Techniques (3)

Emphasizes project management techniques and tools wherein students will learn the necessary skills to track a project, keeping it on time and within budget. Students will apply software to solve project cases and to construct scheduling charts and reports.

Prerequisite: MAN 241

Contact Hours: 45 Contact Hours.

MAN 243 - Project Management in Action (3)

Brings into focus the subject material covered in MAN 241 and CIS 202. Emphasis will be placed on melding general concepts of project management with practical applications of software to complete a project management assignment.

Contact Hours: 45 Contact Hours.

MAN 278 - Seminar (2)

Provides students with experiential learning opportunities in the management area.

Prerequisite: ACC 121, BUS 115, BUS 216, MAN 226, and MAR 216.

Contact Hours: 30 Contact Hours.

MAR - Marketing

MAR 106 - Marketing Your Image (3)

Teaches students how 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, interviewing, and professional appearance) and on skills used to achieve continued personal success (professional behavior and attitude). The course will include at least one simulated interview.

Contact Hours: 45 Contact Hours.

MAR 111 - Principles of Sales (3)

Enables students to understand and develop ethical sales techniques and covers the role of selling in the marketing process. Areas of emphasis include behavioral considerations in the buying and selling process and sales techniques.

Contact Hours: 45 Contact Hours.

MAR 117 - Principles of Retailing (3)

Emphasizes the study of the basic principles and techniques of merchandising operations, layout, store organization, site location and customer service with an emphasis on retailing operations.

Contact Hours: 45 Contact Hours.

MAR 160 - Customer Service (3)

Enables students to learn the relationship of self to customers, problem solve and understand the importance of communicating with customers. Specific emphasis is given to managing customer expectations by building customer rapport and creating positive outcomes.

Contact Hours: 45 Contact Hours.

MAR 216 - Principles of Marketing (3)

Presents the analysis of theoretical marketing processes and the strategies of product development, pricing, promotion and distribution, and their applications to business and the individual consumer.

Contact Hours: 45 Contact Hours.

MAR 217 - E-Commerce Marketing (3)

Explores new marketing strategies that have emerged as areas of information technology and the Internet have evolved. This course examines traditional marketing concepts of buying behavior, promotion, production and others; then redefines them as they apply to marketing on the World Wide Web. Web fundamentals, e-marketing trends, strategies, models and research will be examined.

Contact Hours: 45 Contact Hours.

MAR 220 - Principles of Advertising (3)

Examines the principles and practices of advertising and its relationship to business in order to promote a business or organization. Areas of major emphasis include advertising principles, strategies, media, copy and layout, and ethical considerations.

Contact Hours: 45 Contact Hours.

MAR 222 - Implementing E-Commerce (3)

Provides the student with practical skills and knowledge of e-commerce implementation methodology. Topics include strategic planning for e-commerce, project management, change management, role of technology, implementation planning and assessment. Students use case studies to examine standards and practices of businesses implementing e-commerce applications and solutions.

Contact Hours: 45 Contact Hours.

MAR 235 - Consumer Behavior (3)

Enables the student to understand the variables that affect consumer behavior in the marketplace and the implications of this knowledge for marketing decisions and strategies.

Contact Hours: 45 Contact Hours.

MAR 240 - International Marketing (3)

Enables the student to explore the international marketing for U.S. products, and to explore the increasing competitive international environment and recent changes in the

environment that have challenged U.S. business. The course is designed to make the reader an informed observer of the global market place as well as enabling him/her to develop skills to make marketing decisions in a global context.

Contact Hours: 45 Contact Hours.

MAR 245 - Sales Management (3)

Explores management of the selling function. It includes forecasting, organization of the sales force, recruiting, selection, training, compensation, retention and territory management.

Contact Hours: 45 Contact Hours.

MAT - Mathematics

MAT 025 - Algebraic Literacy Lab (1)

Supports skill development for students registered in MAT 055 Algebraic Literacy. Topics covered in this course include those defined in MAT 055 and/or any prerequisite skills needed by the student. Please see an advisor for new test score requirements in relation to this course being a required corequisite with MAT 055 Algebraic Literacy.

Contact Hours: 15 Contact Hours.

MAT 050 - Quantitative Literacy (4)

Develops number sense and critical thinking strategies, introduce algebraic thinking, and connect mathematics to real world applications. Topics in the course include ratios, proportions, percents, measurement, linear relationships, properties of exponents, polynomials, factoring, and math learning strategies. This course prepares students for Math for Liberal Arts, Statistics, Integrated Math, and college level career math courses.

Contact Hours: 60 Contact Hours.

MAT 055 - Algebraic Literacy (4)

Develops algebraic skills necessary for manipulating expressions and solving equations. Topics in the course include radicals, complex numbers, polynomials, factoring, rational expressions, quadratic equations, absolute value equations and inequalities, systems of linear equations, related applications, and math learning strategies. This course prepares students for College Algebra and Finite Math.

Prerequisite: MAT 050 with a grade of C or better, or appropriate math diagnostic scores
Corequisite: May have corequisite of MAT 025 based on appropriate diagnostic scores.

Contact Hours: 60 Contact Hours.

MAT 091 - Applied Quantitative Lab (1)

Supports skill development for students registered in MAT 103, MAT 107, MAT 108, MAT 109, or MAT 112. Topics covered in this course include those defined in MAT 103/107/108/109/112 and/or any prerequisite skills needed by the student. Please see an advisor for new test score requirements in relation to this course being a required corequisite with MAT 103/107/108/109/112.

Contact Hours: 30 Contact Hours.

MAT 092 - Quantitative Lab (1)

Supports skill development for students registered in MAT 120, MAT 135, MAT 155, or MAT 156. Topics covered in this course include those defined in MAT 120/135/155/156 and/or any

prerequisite skills needed by the student. Please see an advisor for new test score requirements in relation to this course being a required corequisite with MAT 120, MAT 135, MAT 155, or MAT 156.

Contact Hours: 30 Contact Hours.

MAT 093 - Algebra Lab (1)

Supports skill development for students registered in MAT 121 or MAT 123. Topics covered in this course include those defined in MAT 121/123 and/or any prerequisite skills needed by the student. Please see an advisor for new test score requirements in relation to this course being a required corequisite with MAT 121/123.

Contact Hours: 30 Contact Hours.

MAT 101 - Enhanced Mathematics Support (1)

Supplements mathematics classroom instruction through the Mathematics Support Center, a student-centered learning environment. Students will be able to utilize the following resources: professional and peer tutoring, mathematics and tutorial software, online tutorial resource, videotapes, and training guides for these resources. Students will also be able to obtain help with calculators and mathematical software.

Contact Hours: 15 Contact Hours.

MAT 103 - Math for Clinical Calculations (3)

Provides a review of general mathematics, introductory algebra and an opportunity to learn systems of measurement and methods of solving problems related to drug dosage and intravenous fluid administration. It is designed for students in the health disciplines. Topics may include algebra, graphs, measurement and conversion between various systems of measurement.

Prerequisite: MAT 090 or MAT 050 with a grade of C or higher or appropriate diagnostic scores. Note: MAT 103 cannot be applied to any AA or AS Degrees as well as some AAS degrees.

Contact Hours: 45 Contact Hours.

MAT 107 - Career Mathematics (3)

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.

Prerequisite: MAT 045, MAT 060 or MAT 050 with a grade of "C" or better or appropriate diagnostic scores required. Note: MAT 107 cannot be applied to any AA or AS Degrees as well as some AAS degrees.

Contact Hours: 45 Contact Hours.

MAT 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.

Prerequisite: MAT 045, MAT 060 or MAT 050 with a grade of C or better or appropriate diagnostic scores required. Note: MAT 108 cannot be applied to any AA or AS Degrees as well as some AAS degrees.

Contact Hours: 60 Contact Hours.

MAT 108 includes specific applications to certain AAS degree programs such as Manufacturing and Energy Technology and Machining. Check the math requirement for your program to determine whether MAT 107 (p. 204) or MAT 108 is the required math course.

MAT 120 - Mathematics for the Liberal Arts (4)

Develops mathematical and problem-solving skills. Appropriate technological skills are included. Content is selected to highlight connections between mathematics and the society in which we live. Topics include set theory and logic, mathematical modeling, probability and statistical methods, and consumer mathematics. Additional content will include one topic in geometry, numeration systems, decision theory, or management science.

Prerequisite: MAT 096, MAT 099 or MAT 050 with a grade of "C" or better or appropriate diagnostic scores.

Offered: *(GT-MA1).

Contact Hours: 60 Contact Hours.

MAT 121 - College Algebra (4)

Includes a brief review of intermediate algebra, equations and inequalities, functions and their graphs, exponential and logarithmic functions, linear and non-linear systems, selection of topics from among graphing of the conic sections, introduction to sequences and series permutations and combinations, the binomial theorem and theory of equations.

Prerequisite: MAT 096, MAT 099 or MAT 055 with a grade of "C" or better or appropriate diagnostic scores.

Offered: *(GT-MA1).

Contact Hours: 60 Contact Hours.

MAT 122 - College Trigonometry (3)

Covers topics including trigonometric functions (with graphs and inverse functions), identities and equations, solutions of triangles, complex numbers, and other topics as time permits. This is a traditional prerequisite course to the calculus sequence.

Prerequisite: MAT 121 with a grade of "C" or better or appropriate math diagnostic scores.

Offered: *(GT-MA1).

Contact Hours: 45 Contact Hours.

MAT 125 - Survey of Calculus (4)

Includes derivatives, integrals, and their applications, with attention restricted to algebraic, exponential, and logarithmic functions for business, life science and/or social science majors.

Prerequisite: MAT 121 with a grade of "C" or better or MAT 123 with a grade of "C" or better.

Offered: *(GT-MA1).

Contact Hours: 60 Contact Hours.

MAT 135 - Introduction to Statistics (3)

Includes data presentation and summarization, introduction to probability concepts and distributions, statistical inference-estimation, hypothesis testing, comparison of populations, correlation and regression.

Prerequisite: MAT 096, MAT 099 or MAT 050 with a grade of "C" or better or appropriate diagnostic scores.

Offered: *(GT-MA1).

Contact Hours: 45 Contact Hours.

MAT 155 - Integrated Mathematics I (3)

Engages students in the concepts of school mathematics, the course will include the recognition of numerical and geometric patterns and their application to a variety of mathematical situations; mathematical problem-solving, reasoning, critical thinking, and communication; algebraic thinking, representation, analysis, manipulation, generalizations and extensions.

Prerequisite: MAT 096, MAT 099 or MAT 050 with a grade of "C" or better or appropriate diagnostic scores.

Contact Hours: 45 Contact Hours.

MAT 155 & MAT 156 are intended for Early Childhood Education & Elementary Education Students ONLY. Students who take MAT 155 & MAT 156 and who later change to a major outside Early Childhood Teacher Education & Elementary Teacher Education may not receive the guaranteed completion of lower division general education at the receiving 4-yr institution, as MAT 155 & MAT 156 are not gtPathways approved courses.

MAT 156 - Integrated Mathematics II (3)

Furthering MAT 155 concepts, the course will include fundamentals of probability, statistics, and Euclidean geometry. Mathematical problem-solving, reasoning, critical thinking and communication will continue to be an integral part of this sequence.

Prerequisite: MAT 096, MAT 099 or MAT 050 with a grade of "C" or better or appropriate diagnostic scores.

Contact Hours: 45 Contact Hours.

MAT 155 & MAT 156 are intended for Early Childhood Education & Elementary Education Students ONLY. Students who take MAT 155 & MAT 156 and who later change to a major outside Early Childhood Teacher Education & Elementary Teacher Education may not receive the guaranteed completion of lower division general education at the receiving 4-yr institution, as MAT 155 & MAT 156 are not gtPathways approved courses.

MAT 166 - Pre-Calculus (5)

Reviews college algebra and college trigonometry intended for those planning to take calculus. Topics include algebraic manipulations, properties of algebraic and trigonometric functions and their graphs, trig identities and equations, conic sections, polar coordinates and parametric equations.

Prerequisite: MAT 121 with a "C" or higher or appropriate math diagnostic scores.

Offered: *(GT-MA1).

Contact Hours: 75 Contact Hours.

MAT 201 - Calculus I (5)

Introduces single variable calculus and analytic geometry. Includes limits, continuity, derivatives, and applications of derivatives as well as indefinite and definite integrals and some applications.

Prerequisite: MAT 122 with a grade of "C" or better or MAT 166 with a grade of "C" or better or appropriate math diagnostic scores.

Offered: *(GT-MA1).

Contact Hours: 75 Contact Hours.

MAT 202 - Calculus II (5)

Continuation of single variable calculus that will include techniques of integration, polar coordinates, analytic geometry, improper integrals, and infinite series.

Prerequisite: MAT 201 with a grade of "C" or better.

Offered: *(GT-MA1).

Contact Hours: 75 Contact Hours.

MAT 203 - Calculus III (4)

Completes the traditional subject matter of the Calculus. Topics include vectors, vector-valued functions and multivariable calculus including partial derivatives, multiple integrals, line integrals and application.

Prerequisite: MAT 202 with a grade of "C" or better or MAT 204 with a grade of "C" or better.

Offered: *(GT-MA1).

Contact Hours: 60 Contact Hours.

This course is available via CCCOnline

MAT 204 - Calculus III with Engineering Applications (5)

Includes all the topics of MAT 203 Calculus III with an additional emphasis on word problems and problem solving. This is the third course in the three-course calculus sequence. This course will additionally contain a thorough examination of multiple integration. This will include double and triple integrals, line integrals, Stokes' and Green's Theorems, and their applications. A graphing calculator is required for this course.

Prerequisite: MAT 202 with a grade of "C" or better.

Offered: *(GT-MA1).

Contact Hours: 75 Contact Hours.

MAT 255 - Linear Algebra (3)

Includes vector spaces, matrices, linear transformations, matrix representation, eigenvalues, and eigenvectors.

Prerequisite: MAT 202 with a grade of "C" or better.

Contact Hours: 45 Contact Hours.

MAT 265 - Differential Equations (3)

Emphasizes techniques of problem solving and applications. Topics include first, second and higher order differential equations, series methods, approximations, systems of differential equations, and Laplace transforms.

Prerequisite: MAT 202 with a grade of "C" or better.

Offered: *(GT-MA1).

Contact Hours: 45 Contact Hours.

MAT 266 - Differential Equations with Linear Algebra (4)

Covers first and second order differential equations, series solutions, Laplace transforms, linear algebra, eigenvalues, first order systems of equations, and numerical techniques are covered.

Prerequisite: MAT 202 with a grade of "C" or better.

Contact Hours: 60 Contact Hours.

MET - Meteorology

MET 150 - General Meteorology (4)

Provides an introduction to general meteorology and atmospheric sciences. It includes the composition and structure of the atmosphere and characteristics that affect the atmosphere, such as temperature, pressure, and moisture. Additionally, the development of weather systems such as storm systems, hurricanes, weather fronts and cloud development will also be examined. Finally, concepts of climatology will be stressed.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 75 Contact Hours (45 lecture hours, 30 lab hours).

MGD - Multimedia Graphic Design**MGD 102 - Introduction to Multimedia (3)**

Introduces the types of equipment and technical considerations used in multimedia productions and the multimedia professions. It focuses on current types of equipment such as scanners, printers, digital cameras and computers. Students gain hands-on experience in how the technology is utilized for input and output in production and design projects. Overview of software and basic design principles will be explored.

Contact Hours: 67.5 Contact Hours.

MGD 103 - Production Design (3)

Explores the use of tools, computer graphics techniques and design layout principles to produce professional graphic designs. Studies include printing basics, typography and digital color systems. Students use creative thinking to solve communication and design concepts for the output process.

Contact Hours: 67.5 Contact Hours.

MGD 104 - Videography (3)

Offers an introduction to the principles and techniques of videotape production, including camera operation, basic script writing, lighting, sound and basic digital editing. Detailed examination of the pre-production, production, and post-production processes, as well as aesthetics, will be included.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 106 - Creativity and Visual Thinking (3)

Introduces the visual thinking skills necessary to understand and use the creative process, develop innovative concepts and forms, and to produce and analyze creative works. The underlying components of creative thinking, the creative process, and the creative economy are of primary concern in this class. This class is about concept development and sketching.

Contact Hours: 67.5 Contact Hours.

MGD 109 - Design and Color (3)

Covers the design process and creative problem solving. Design and color theories, fundamentals, styles, and stages are applied to workups, finished art, and presentations. Emphasis will be on line, form, composition, and continuity.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 111 - Adobe Photoshop I (3)

Concentrates on the high-end capabilities of a raster photo-editing software as an illustration, design and photo-retouching tool. Students explore a wide range of selection and manipulation techniques that can be applied to photos, graphics and videos.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding and knowledge of an operating system

MGD 112 - Adobe Illustrator I (3)

Acquaints students with the processes of a vector-drawing program on the computer. Students learn how to use the tools to create digital artwork that can be used in web design, print media and digital screen design.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding and knowledge of an operating system

MGD 114 - Adobe InDesign (3)

Introduces students to InDesign, a page layout program that 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.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 116 - Typography I (3)

Introduces the history and concepts of typography as applied to graphic communications. Explores appropriate use of typography in a variety of design applications, emphasizing the basic design principles of typographic compositions and typesetting. Covers type recognition and typographic terms.

Contact Hours: 67.5 Contact Hours.

MGD 117 - Introduction to Visual Communications (3)

Surveys visual communications, its history and impact on society. A foundation course for graphic design and illustration majors and a survey for non-majors who are interested in the field. Assignments require minimal artistic talent.

Contact Hours: 67.5 Contact Hours.

Overview of software and basic design principles will be explored

MGD 121 - Painter for Digital Media (3)

Teaches students how to work with an illustration and paint software application called Painter. Color and relationships, repeat patterns, animation and digitization are among the topics covered in the course as students explore the possibilities of visual art using computers. Assigned projects cover a wide range of visual approaches. Painter provides an extra competitive edge for students.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 123 - Bryce (3)

Explores the unique abilities of Bryce for creating photo realistic natural scenes in 3D. Students will learn the tools, techniques and concepts involved in the use of the software. Additionally, students will study the works of premiere Bryce artists and create numerous images and animations of their own. Emphasis will be placed on structure, composition, lighting and color theory.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 128 - Multimedia Hardware (3)

Teaches the principles and techniques of maintaining, upgrading, and customizing personal computer systems. Emphasis will also be placed on various emerging and established technologies related to graphic computing.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 133 - Graphic Design I (3)

Focuses upon the study of design layout and conceptual elements concerning graphic design projects such as posters, advertisements, logos, and brochures.

Contact Hours: 67.5 Contact Hours.

MGD 134 - Drawing for Illustrators (3)

Covers fundamental skills and theories of drawing and rendering line structure, form, value, texture, and composition. Application of drawing skills with various media for line quality as well as value and texture interpretations are also covered.

Contact Hours: 67.5 Contact Hours.

MGD 141 - Web Design I (3)

Introduces web site planning, design and creation using industry-standards-based web site development tools. Screen-based color theory, web aesthetics, use of graphics editors and intuitive interface design are explored.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 143 - Motion Graphic Design I (3)

Stresses creation of animated GIFs and dynamic, interactive media for Web applications. Students will learn how to draw objects, create symbols, and assemble motion tweens.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: keyboarding and a demonstrated knowledge of the Windows and/or Macintosh operating system with a working knowledge of at least one multimedia software application, such as, Adobe Photoshop or Adobe Illustrator.

Without a working knowledge of multimedia software, the student needs the permission of the instructor to enroll

MGD 152 - Digital Animatics (3)

Introduces the steps followed by professional animators and game designers for producing media in a digital environment. Students learn the foundational skills of planning, organizing, storyboarding and pre-visualization techniques necessary to create animated stories. Students will also study the history of animation and game design.

Contact Hours: 67.5 Contact Hours.

MGD 153 - 3D Animation I (3)

Encompasses all major aspects of creating 3D characters using animation software. Using developed characters, the student will learn how to animate for personality.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application.

MGD 161 - Director I (3)

Examines Macromedia Director, the leading authoring tool for interactive multimedia from the art director's perspective. Students will learn the basics of 2D animation for both computer presentations and the web. Interface design and scene development is emphasized. Hands-on projects include lingo scripts, behaviors, adding sound and digital video to students' movies.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 163 - Sound Design I (3)

Explores the use of sound in multimedia production and audio storytelling. Students examine the principles of recording. Classes focus on how sound can enhance interactive productions and improve computer presentations. Students learn how to use the computer as a full audio editing studio.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 164 - Digital Video Editing I (3)

Introduces digital non-linear video editing. Students will capture, compress, edit, and manipulate video images using a personal computer. Assembly techniques including media management, editing tools, titles, and motion control; transitions and filters, and special effects are explored.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 165 - After Effects I (3)

Provides the fundamental techniques for creating digital motion graphics such as 2D animations, animated logos, video graphics,

etc. Classes cover relevant tools and techniques as well as industry standards, delivery methods and output.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 167 - Game Design I (3)

Introduces students to game design from conceptual development and functionality, through production of a virtual world prototype. Students examine such things as character registration, in-betweens, inking and clean up used for creating real-time game environments. Storytelling and visual metaphor development are emphasized.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Basic keyboarding, knowledge of an operating system and at least one multimedia software application

MGD 202 - Point of Purchase Package Design (3)

Introduces the theories and principles that apply to three-dimensional design graphics for packaging and display; various dimensional marketing solutions to create dynamic visual effects concepts will be developed. Work layout stages and mock-ups will utilize various methods of cutting, folding, and assembly to explore the design concepts and their visual effects.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: MGD 111 (p. 206) or MGD 112 (p. 206)

MGD 203 - Design and Concept (3)

Covers the process of comprehensive problem solving of complex and advanced print design. Provides experience in digital production of designs, using multiple computer applications emphasizing concept.

Prerequisite: MGD 103

Contact Hours: 67.5 Contact Hours.

MGD 204 - Videography II (3)

Offers advanced study of digital video imaging concepts using digital cameras. Heavy emphasis is placed upon media aesthetics and the creative integration of sight, sound, and motion in student projects.

Prerequisite: MGD 104

Contact Hours: 67.5 Contact Hours.

MGD 211 - Adobe Photoshop II (3)

Develops and reinforces image composition techniques learned in Adobe Photoshop I, MGD 111. Fundamentals are continuously reinforced as new design techniques are introduced.

Prerequisite: MGD 111

Contact Hours: 67.5 Contact Hours.

MGD 212 - Adobe Illustrator II (3)

Enables the student to continue development of electronic drawing skills through practice and use of state-of-the-art illustration software.

Prerequisite: MGD 112

Contact Hours: 67.5 Contact Hours.

MGD 221 - Computer Graphics I (3)

Introduces the process of generating computer design.

Contact Hours: 67.5 Contact Hours.

MGD 222 - Computer Graphics II (3)

Continues MGD 221 with advanced problems in generating computer design for graphics application, emphasizing production of individual fine art pieces.

Prerequisite: MGD 221

Contact Hours: 67.5 Contact Hours.

MGD 233 - Graphic Design II (3)

Continues instruction in idea development for advanced graphic design.

Prerequisite: MGD 133

Contact Hours: 67.5 Contact Hours.

MGD 241 - Web Design II (3)

Expands on previously learned fundamentals of HTML introducing cascading style sheets, DHTML, JavaScripts and CGI forms. Color usage and interface design principles are emphasized in this course. In this course we'll examine websites that employ more complex structures, optimal site architecture and navigation necessary for larger and more complex sites.

Prerequisite: MGD 141 or CWB 130

Contact Hours: 67.5 Contact Hours.

MGD 242 - Web Architecture: Open Source (3)

Provides an overview of current open source tools used in the design industry for designing and implementing Web architecture. Course content changes with trends in the industry. Topics may include current content management platforms such as WordPress and Drupal, how to identify web scripting languages, and an overview of open source programming such as PHP and MySQL.

Contact Hours: 67.5 Contact Hours.

MGD 243 - Web Motion Graphic Design II (3)

Stresses the complex creation of 2D animated motion graphics concentrating on the prior skills learned and the use of scripting and behaviors. Students will create motion graphics using these skills and apply them to websites. Website justification of motion graphics will be stressed, appraised and weighed.

Prerequisite: MGD 143

Contact Hours: 67.5 Contact Hours.

MGD 244 - Integrated Multimedia Development 1 (3)

Plans and produces content for a single large-scale video/multimedia project, which stimulates a professional multimedia design agency. Students are exposed to all phases of digital media production with a focus on meeting with clients, creating proposals, researching, interviewing, writing, video/audio recording/editing, and titling. Students learn to meet real deadlines and work collaboratively.

Contact Hours: 67.5 Contact Hours.

MGD 245 - Integrated Multimedia Development 2 (3)

Continues from Integrated Multimedia Development 1. Students will create and deliver a single large-scale video/multimedia project. Students are exposed to all phases of post-production, with a focus on editing, animating and delivering the product on time. Students gain experience of working as a professional video and digital media agency and leave with a portfolio/demo reel piece.

Contact Hours: 67.5 Contact Hours.

MGD 253 - 3D Animation II (3)

Addresses more advanced aspects of creating 3D characters on the computer. Students also examine facial animation, lip synchronization, scene design and lighting set-ups.

Prerequisite: MGD 153

Contact Hours: 67.5 Contact Hours.

MGD 256 - Graphic Design Production (3)

Provides an opportunity to combine several draw and paint applications into one design and layout class. Students will explore advanced techniques in creating and designing computer art.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: MGD 114 (p. 206)

MGD 257 - Animation Production (3)

Examines development of 3D animation from a production standpoint. The process of transforming conceptual designs into actual projects is explored. Students study the management function of those tasks associated with the business end of development. The student will produce a 3D animation project.

Prerequisite: MGD 253

Contact Hours: 67.5 Contact Hours.

MGD 258 - Web Design Production (3)

Stresses website development and usability issues, as well as, pre-production, production and post-production concepts. Students will prepare project evaluations, objectives and analysis reports, project budgets and time-lines, content outlines, storyboards, and flow charts. Students will also examine interactive interface design for several Web applications. Projects will vary from semester to semester.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: MGD 141 (p. 207)

MGD 259 - Management and Production (3)

Examines development of multimedia from a production standpoint. The process of transforming conceptual designs into actual projects is explored. Students study the management function of those tasks associated with the business end of development. Teamwork is emphasized throughout the course.

Prerequisite: Permission of instructor

Contact Hours: 67.5 Contact Hours.

MGD 261 - Director II (3)

Explores the interactive process within all areas of program design; immersive creations, courseware authoring, delivery techniques and instruction strategies. Students are introduced to advanced Lingo scripting, 3D object integration and Shockwave

Multiuser Server to provide more expansive interactive capabilities.

Prerequisite: MGD 161

Contact Hours: 67.5 Contact Hours.

MGD 264 - Digital Video Editing II (3)

Looks at the more complex and advanced techniques of digital video editing. Areas of editing such as masking, filtering, blue/green screening, track mattes, and image mattes will be examined. Students will produce a movie project in this class and discuss practical ways to distribute to various audiences.

Prerequisite: MGD 164

Contact Hours: 67.5 Contact Hours.

MGD 266 - DVD Authoring (3)

Introduces students to all aspects of DVD authoring covering: source acquisition, DVD production, interface design, organization, management and appropriate DVD output solutions.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: MGD 111 (p. 206) or instructor approval

MGD 268 - Business for Creatives (3)

Presents a guide to freelance work and a study of business practices and procedures unique to commercial art including billing rates, client management, business forms, employee management, taxes, licenses, registration, bid processes and self-promotion. Course may include visits by professionals in the field and discussion of career opportunities and professional organizations.

Contact Hours: 67.5 Contact Hours.

MGD 280 - Internship (2)

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 business location and with the direct guidance of the instructor/ coordinator.

Contact Hours: 90.

MGD 289 - Capstone (1)

Focuses on demonstrated culmination of learning within a given program of study.

MOT - Medical Office Technology**MOT 110 - Medical Office Administration (4)**

Introduces the administrative duties specifically used in medical offices.

Contact Hours: 60 Contact Hours.

MOT 120 - Medical Office Financial Management (3)

Covers the practical uses of accounts and records with emphasis on accounting principles and analysis for use in a medical office.

Contact Hours: 45 Contact Hours.

MOT 125 - Basic Medical Sciences I (3)

Teaches the anatomy and physiology, pathophysiology and drug therapy of the immune, musculoskeletal and digestive systems. A discussion of pediatric implications as they relate to clinical

physiology will also be covered. Students may take MOT 125 (p. 209), MOT 133 (p. 210) and MOT 135 (p. 210) in any order, but all three courses must be completed to meet the basic medical sciences requirement.

Prerequisite: Prerequisite/Corequisite: HPR 178 or HPR 208

Contact Hours: 67.50 Contact Hours.

MOT 130 - Insurance, Billing and Coding (3)

Introduces outpatient 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.

Contact Hours: 45 Contact Hours.

Recommended Preparation: HPR 208 (p. 190) with a grade of "C" or better. MOT 120 (p. 209) and HPR 137 (p. 190) should be taken concurrently with this course or completed prior to taking this course.

MOT 132 - Medical Transcription I (4)

Provides basic knowledge, understanding and skills required to transcribe medical dictation with accuracy, clarity, and timeliness applying the principles of professional and ethical conduct.

Contact Hours: 60 Contact Hours.

MOT 133 - Basic Medical Sciences II (3)

Teaches the anatomy and physiology, pathophysiology and drug therapy of the cardiovascular, respiratory and dermatology systems. Students may take MOT 125 (p. 209), MOT 133 (p. 210) and MOT 135 (p. 210) in any order, but all three courses must be completed to meet the basic medical sciences requirement.

Prerequisite: Prerequisite/Corequisite: MOT 125

Contact Hours: 67.50 Contact Hours.

MOT 135 - Basic Medical Sciences III (3)

Covers the anatomy and physiology, pathophysiology and drug therapy of the Renal, Reproductive, Neurological and Endocrine systems. Students may take MOT 125 (p. 209), MOT 133 (p. 210) and MOT 135 (p. 210) in any order, but all three courses must be completed to meet the basic medical sciences requirement.

Prerequisite: Prerequisite/Corequisite: MOT 133

Contact Hours: 45 Contact Hours.

MOT 136 - Introduction to Clinical Skills (2)

Provides hands-on experience with the basic clinical skills required for assisting with patient care. Delivers the theory behind each skill presented as well as proper technique for performing each skill. Includes knowledge and/or performance of blood-borne pathogens/Occupational Safety and Health Administration (OSHA) regulations, medical asepsis, procedural gloving, patient gowning, positioning and measurement of vital signs.

Contact Hours: 45 Contact Hours.

MOT 138 - Medical Assisting Laboratory Skills (4)

Introduces the student to basic routine laboratory skills and techniques for collection, handling, and examination of laboratory specimens often encountered in the ambulatory care setting. Emphasizes hands-on experience.

Contact Hours: 75 Contact Hours.

Recommended Preparation: BIO 106 (p. 145), HPR 106 (p. 189), HPR 208 (p. 190), MOT 136 (p. 210) and PSY 101 (p. 227), all with a grade of "C" or better. HPR 137 (p. 190), MOT 140 (p. 210), MOT 150 (p. 210) and MOT 183 (p. 211) should be taken concurrently with this course or completed prior to taking this course.

MOT 140 - Medical Assisting Clinical Skills (4)

Provides hands-on experience with the clinical skills required for assisting with patient care. Delivers the theory behind each skill presented as well as proper technique for performing each skill.

Contact Hours: 90 Contact Hours.

Recommended Preparation: BIO 106 (p. 145), HPR 106 (p. 189), HPR 208 (p. 190), MOT 136 (p. 210) and PSY 101 (p. 227), all with a grade of "C" or better. HPR 137 (p. 190), MOT 140 (p. 210), MOT 150 (p. 210) and MOT 183 (p. 211) should be taken concurrently with this course or completed prior to taking this course.

MOT 142 - Medical Transcription II (4)

Uses a simulation approach to build student vocabulary and speed, while providing actual medical transcription of a variety of health care and medical reports at progressively increasing accuracy and productivity standards.

Contact Hours: 90 Contact Hours.

Recommended Preparation: BIO 106 (p. 145), CIS 135 (p. 151), ENG 121 (p. 171), HPR 106 (p. 189), HPR 208 (p. 190), and MOT 132 (p. 210) all with a grade of "C" or better. HPR 137 (p. 190) and MOT 150 (p. 210) should be taken concurrently with this course or completed prior to taking this course.

MOT 150 - Pharmacology for Medical Assistants (3)

Provides an overview of pharmacology language, abbreviations, systems of measurement and conversions. The Controlled Substance Act, prescriptions, forms of medications, patient care applications, drug classifications/interactions, and safety in drug therapy and patient care are presented. Information regarding the measurement of medications, dosage calculations, routes of administration, and commonly prescribed drugs in the medical office is provided.

Contact Hours: 52.5 Contact Hours (30 lecture hours, 22.5 lab hours).

Recommended Preparation: BIO 106 (p. 145), HPR 106 (p. 189), and HPR 208 (p. 190) all with a grade of "C" or better. HPR 137 (p. 190) should be taken concurrently with this course or completed prior to taking this course. See the list of specialized courses on the first page of this course offerings section.

MOT 181 - Administrative Internship (3)

Provides supervised placement in a contracted facility for guided experience in the application of knowledge and skills acquired in the classroom. Student must have permission by the program coordinator to begin internship. Positions are non-paid.

Contact Hours: 105 Contact Hours (15 lecture hours, 90 lab hours).

Recommended Preparation: Completion of all Medical Administrative Assisting coursework PSY 101 (p. 227) or PSY 235 (p. 227), BIO 106 (p. 145), CIS 118 (p. 151), ENG 121 (p. 171), HPR 106 (p. 189), HPR 137 (p. 190), HPR 208 (p. 190), MOT 110

(p. 209), MOT 120 (p. 209), MOT 130 (p. 210), MOT 132 (p. 210) and MOT 136 (p. 210) all with a grade of "C" or better.

MOT 183 - Medical Assistant Internship (5)

Provides supervised placement in a contracted facility for guided experience in the application of knowledge and skill acquired in the classroom. The student assists with a variety of business and clinical procedures. Positions are non-paid due to CAAHEP requirement. Student must have permission by the program coordinator to begin internship. Positions are non-paid.

Contact Hours: 195 Contact Hours (15 lecture hours, 180 lab hours).

Recommended Preparation: Completion of all Medical Assisting coursework PSY 101 (p. 227), BIO 106 (p. 145), ENG 121 (p. 171), HPR 106 (p. 189), HPR 137 (p. 190) and HPR 208 (p. 190) all with a grade of "C" or better. Students should also hold current CPR and First Aid certifications.

MOT 184 - Billing Specialist Internship (4)

Provides supervised placement in a contracted facility for guided experience and application of knowledge and skill acquired in the classroom. The student assists with a variety of business and billing procedures. Student must have permission by the program coordinator to begin internship. Positions are non-paid.

Contact Hours: 150 Contact Hours (15 lecture hours, 135 lab hours).

Recommended Preparation: Completion of all Billing Specialist coursework ACC 101 (p. 131), BIO 106 (p. 145), CIS 118 (p. 151), ENG 121 (p. 171), HPR 106 (p. 189), HPR 137 (p. 190), HPR 208 (p. 190), MOT 120 (p. 209) and MOT 130 (p. 210) all with a grade of "C" or better.

MST - Massage Therapy

MST 111 - Basic Massage Therapies (4)

Introduces theory and techniques of therapeutic massage, including understanding of physiological benefits of massage as well as proper body mechanics and appropriate draping. Focuses on basic strokes of Swedish massage. Students also learn techniques of seated massage.

Prerequisite: BIO 106 and HPR 178 (or HPR 208) and HHP 224

Contact Hours: 60 Contact Hours.

MST 113 - Professional Massages (3)

Continues the study of Integrative Therapeutic Massage techniques with emphasis on assessing and meeting client's needs. Students give massage in supervised in-class clinicals, applying appropriate therapeutic intervention.

Prerequisite: MST 111

Contact Hours: 90 Contact Hours.

MST 178 - Seminar (3)

Provides students with an experiential learning opportunity.

Prerequisite: MST 113

Contact Hours: 67.5 Contact Hours.

MST 184 - Clinical Massage I (2)

Applies skills in a clinical setting. Focuses on improvement of massage therapy skills, ethics, and communication.

Prerequisite: MST 113

Contact Hours: 60 Contact Hours.

MST 216 - Pathology for Massage therapy (3)

Focuses on basic knowledge of disease and injury to assist the massage therapist to promote healing, ease pain and discomfort, and avoid complications during therapy. With a broad perspective of pathology and specific pathophysiology of diseases contributing to the need for massage therapy, this course provides the foundational science for safe practice. Applies skills in a clinical setting.

Prerequisite: MST 111, HPR 117

Contact Hours: 45 Contact Hours.

MST 284 - Clinical Massage II (2)

Provides an application of massage therapy skills in a clinical setting. This course focuses on improvement of techniques, communication with clients and other health professionals as well as documentation of massage sessions.

Prerequisite: MST 184

Contact Hours: 60 Contact Hours.

MTE - Manufacturing Technology

MTE 101 - Introduction to Manufacturing (3)

Gives students a broad understanding of manufacturing and the role of the manufacturing technician. Students learn how manufacturing is important to Colorado and the U.S. Topics covered include manufacturing concepts, principles and processes, cost elements, tools and techniques, safety, current trends and manufacturing in the future.

Contact Hours: 45 Contact Hours.

MTE 105 - Safety for Manufacturing Environments (1)

Introduces federal and state regulations, industrial practices, and accident investigation techniques. Covers hazard communication standard, lockout/tagout procedures, eye safety, lifting techniques, electrical safety, stored energy safety, personal protective equipment, safety program development and monitoring, and accident investigation techniques. Serves as the prerequisite for all Advanced Technology Center programs.

Contact Hours: 15 Contact Hours.

MTE 106 - Print Reading for Manufacturing (3)

Instructs students in reading and understanding industrial prints. This course covers basic drafting and print standards, fundamentals of shape description, fundamentals of size description and annotation, industrial drawing types, and specialized parts and prints. Symbol interpretation, tolerancing and dimensioning standards are also covered.

Contact Hours: 45 Contact Hours.

MTE 110 - Manufacturing Communication and Teamwork (3)

Explores the advantages and disadvantages of using teams as a valid method to promote communication, critical thinking, and problem solving in business and industry. This course is designed to train individuals in the skills necessary to be a contributing member of an industry or business team. Topics covered are emotional intelligence, team dynamics, conflict resolution, multi-rater assessment and personal leadership skills.

Contact Hours: 45 Contact Hours.

MTE 125 - Statistical Process Control (3)

Expose students to the classical concepts of quality control in a style and depth that should be acquired by all employees of the process industry. Discuss and use quality management philosophies and Statistical Process Control tools and charts. Demonstrate and use employee involvement processes.

Prerequisite: MAT 108

Contact Hours: 45 Contact Hours.

MTE 130 - Metrology (3)

Exposes the student to the principles of dimensional metrology. Students will learn how to use common measuring instruments relating to state-of-the-art manufacturing environments. Students will also learn the importance of Quality Control, TQM and SPC processes as they relate to manufacturing environments. Use of a coordinate measuring machine will be delivered.

Contact Hours: 67.5 Contact Hours.

MTE 135 - Lean Six Sigma (4)

Exposes students to the Lean Six Sigma DMAIC (Define, Measure, Analyze, Improve, Control) improvement approach along with statistical and lean tools used in industry.

Prerequisite: MAT 108

Contact Hours: 90 Contact Hours.

MTE 238 - Industrial Fluid Power & Controls (3)

Introduces fluid power application in industry and various types of industrial control devices used in modern manufacturing equipment and machinery. Enables the student to produce the graphics required to incorporate these items into a mechanical design.

Contact Hours: 67.5 Contact Hours.

MTE 244 - Lean Manufacturing Practices and Processes (3)

Provides a study of Lean Manufacturing. The students study and develop in the lab the following lean concepts/methods: lean philosophy, fundamental wastes, defining value, five S, value stream identification, process rationalization, continuous process improvement, inventory management optimization model, value stream mapping, creating process flows, cellular manufacturing, pull vs. push systems, just-in-time, kanban systems, standardized work, jidoka, fail-safing, quick change/setup reduction methods, SCM cycle time reduction, and VRM.

Prerequisite: MTE 110

Contact Hours: 45 Contact Hours.

See the list of Specialized Manufacturing Technology Courses on the first page of this Course Offerings section.

MTE 280 - Internship: Manufacturing (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 business location and with the direct guidance of the instructor.

Contact Hours: 45 Contact Hours.

MTE 289 - Manufacturing Capstone (1)

Provides a demonstrated culmination of learning within a given program of study.

Contact Hours: 15 Contact Hours.

MUS - Music**MUS 100 - Introduction to Music Theory I (3)**

Introduces the basics of music theory. Course designed to help the beginning music student, or those students with limited background in music theory, study the basic elements of music. Topics include notation, rhythm, scales, key signatures, intervals, chords, beginning level melodic and rhythm dictation, ear-training and sight singing skills.

Contact Hours: 45 Contact Hours.

MUS 101 - Introduction to Music Theory II (3)

Continues the introduction of basics of music theory and builds upon skills developed in MUS 100. Course designed to help the beginning music student, or those students with limited background in music theory, study the basic elements of music, including notation, rhythm, scales, key signatures, intervals, and chords. Course continues to develop beginning level melodic and rhythm dictation, ear-training and sight singing skills.

Contact Hours: 45 Contact Hours.

Recommended Preparation: MUS 100.

MUS 106 - Songwriting (3)

Examines the various processes and styles of songwriting and offers techniques and ideas for creating songs ranging from functional to original. Students will explore the common factors in all styles of songwriting, and use them to bring out creative song ideas whether they have written songs before or have just always wanted to see if they could. A basic knowledge of music reading for any instrument and elementary music theory is recommended, but not required.

Contact Hours: 45 Contact Hours.

Recommended Preparation: MUS 100.

MUS 110 - Music Theory I (3)

Presents music fundamentals, diatonic four-part harmony, analysis, ear training, and keyboard harmony.

Contact Hours: 45 Contact Hours.

Recommended Preparation: MUS 100.

MUS 111 - Music Theory II (3)

Presents chromatic four-part harmony, analysis, ear training, and keyboard harmony.

Prerequisite: MUS 110 and MUS 112 Corequisite: MUS 113

Contact Hours: 45 Contact Hours.

MUS 112 - Ear Training/Sight-Singing I Lab (1)

Presents exercises in sight-singing with melodic and rhythmic dictation.

Contact Hours: 15 Contact Hours.

Recommended Preparation: MUS 100

MUS 113 - Ear Training/Sight-Singing II Lab (1)

Presents exercises in sight-singing with melodic and rhythmic dictation.

Prerequisite: MUS 112 Corequisite: MUS 111

Contact Hours: 15 Contact Hours.

MUS 120 - Music Appreciation (3)

Covers the basic materials of music, musical forms, media, genres and musical periods. Emphasizes the development of tools for intelligent listening and appreciation.

Prerequisite: Co-Req or Prereq: CCR 092, CCR 093, or CCR 094 OR Prereq: ENG 060, ENG 090, or ENG 121. CCR courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

MUS 121 - Music History Medieval to Classical (3)

Studies the various periods of music history with regard to the composers, aesthetics, forms, and genres of each period. Considers music from the Middle Ages through the Classical period.

Prerequisite: CCR 092, CCR 093 or CCR 094 or ENG 121. CCR courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

MUS 122 - Music History Romantic to Present (3)

Studies the various periods of music history with regard to the composers, aesthetics, forms, and genres of each period. Considers music from the early Romantic period to the present.

Prerequisite: CCR 092, CCR 093 or CCR 094 or ENG 121. CCR courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

MUS 123 - Survey of World Music (3)

Provides an overview of non-Western music from around the world; provides basic listening skills and the historical/cultural context for a variety of world music styles to enable an understanding and appreciation of non-Western musical expression.

Prerequisite: CCR 092, CCR 093 or CCR 094 or ENG 121. CCR courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

MUS 125 - History of Jazz Music (3)

Provides a survey of basic materials of music and the forms, media, genres, historical, and cultural style periods of jazz. It emphasizes the development of tools for intelligent listening and appreciation.

Prerequisite: CCR 092, CCR 093 or CCR 094 or ENG 121. CCR courses may be taken concurrently.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

MUS 126 - History of Rock and Pop (3)

Provides a survey of basic materials of music, musical forms, media, genres, and musical periods of Rock and Pop music. It emphasizes the development of tools for intelligent listening and appreciation.

Contact Hours: 45 Contact Hours.

MUS 131 - Music Class I (Guitar, Piano or Voice) (2)

Applies the fundamentals of music to the voice or specific musical instruments. This course also introduces basic techniques, repertoire, and sight-reading.

Contact Hours: 30 Contact Hours.

MUS 132 - Music Class II (Guitar, Piano or Voice) (2)

Applies the fundamentals of music to the voice or specific musical instruments. The course also introduces basic techniques, repertoire, and sight-reading.

Contact Hours: 30 Contact Hours.

Recommended Preparation: MUS 131 (p. 213).

MUS 141 - Private Instruction I (1-2)

Offers private instruction consisting of a 30- or 60-minute lesson per week. Participation in a one student performance is required at least once each term.

Contact Hours: 7.5-15 Contact Hours.

MUS 142 - Private Instruction II (1-2)

Offers private instruction consisting of a 30- or 60-minute lesson per week. Participation in a student performance is required at least once each term.

Prerequisite: MUS 141

Contact Hours: 7.5-15 Contact Hours.

MUS 151 - Ensemble I (Orchestra, Chamber Music, Chamber Choir, Vocal Jazz, Jazz Combo) (1)

Rehearses and performs various types of musical literature.

Contact Hours: 37.5 Contact Hours.

MUS 152 - Ensemble II (Orchestra, Chamber Music, Chamber Choir, Vocal Jazz, Jazz Combo) (1)

Rehearses and performs various types of musical literature.

Prerequisite: MUS 151

Contact Hours: 37.5 Contact Hours.

MUS 161 - Computer Music Applications I (3)

Introduces students to the Digital Audio Workstation, current practices in Musical Instrument Digital Interface (MIDI) instruments, MIDI sequencing, MIDI editing, and music notation programs.

Contact Hours: 45 Contact Hours.

MUS 162 - Computer Music Applications II (3)

Designed to build on MUS 161. Course will further explore the Digital Audio Work (DAW) environment. Advanced music notation software techniques, creating unique synthesizer timbres, and audio/video synchronization will be among the topics explored.

Contact Hours: 45 Contact Hours.

Recommended Preparation: MUS 161.

MUS 163 - Music Audio Production I (3)

Designed to give students with a strong interest in music a basic understanding of the Music Production process. This includes the basic knowledge of audio/music production, the fundamentals of sound and microphones, digital and analog technology, recording, and mixing.

Contact Hours: 45 Contact Hours.

MUS 164 - Music Audio Production II (3)

Designed to build on the concepts of MUS 163 (p. 213). This class will be more project oriented with emphasis on using the techniques discussed in MUS 163. An emphasis on critical listening through each phase of the recording process will be made.

Prerequisite: MUS 163

Contact Hours: 45 Contact Hours.

MUS 167 - Music Business I (3)

Designed to give music students, or those students with strong interest in business and music, a complete overview and in-depth examination of the current, historic and projected business practices in the music industry.

Contact Hours: 30 Contact Hours.

MUS 168 - Audio Post Production I (3)

Explores the steps in audio production following initial sound capture and overdubbing of sound. Key concepts include sound design, mixing, and addition of effects. Integration of music with picture is also discussed, and key concepts such as automatic dialogue replacement, foley, score, and voiceover recording are covered.

Contact Hours: 45 Contact Hours.

Recommended Preparation: MUS 161, MUS 162, MUS 163 OR MUS 164

MUS 184 - Internship (12)

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 business location and with the direct guidance of the instructor.

Prerequisite: No Prerequisites or Recommended Preparation.

MUS 210 - Music Theory III (3)

Continues study of four-part music, including extended harmonic progressions of 9th, 11th, 13th chords, extended alteration, non-chord tones, modulation and compositions.

Prerequisite: MUS 111 and MUS 113 Corequisite: MUS 212

Contact Hours: 45 Contact Hours.

MUS 211 - Music Theory IV (3)

Offers a continuation of chromatic harmony, analysis, ear-training, and keyboard harmony. New topics will include Impressionism and 20th Century styles of composition.

Prerequisite: MUS 210 and MUS 212 Corequisite: MUS 213

Contact Hours: 45 Contact Hours.

MUS 212 - Advanced Ear Training/Sight-Singing I Lab (1)

Presents modulating and chromatic exercises in sight-singing and dictation. Dictation includes four-part writing.

Prerequisite: MUS 111 and MUS 113. Corequisite: MUS 210

Contact Hours: 15 Contact Hours.

MUS 213 - Advanced Ear Training/Sight-Singing II Lab (1)

Presents modulating and chromatic exercises in sight-singing and dictation. Dictation includes four-part writing.

Prerequisite: MUS 210 and MUS 212 Corequisite: MUS 211

Contact Hours: 15 Contact Hours.

MUS 241 - Private Instruction I (1-2)

Offers private instruction consisting of a 30- or 60-minute lesson per week. Participation in a student performance is required at least once each term.

Prerequisite: Permission of instructor.

Contact Hours: 7.5-15 Contact Hours.

MUS 242 - Private Instruction II (1-2)

Offers private instruction consisting of a 30- or 60-minute lesson per week. Participation in a student performance is required at least once each term.

Prerequisite: Permission of instructor.

Contact Hours: 7.5-15 Contact Hours.

MUS 261 - Advanced Music Audio Production (3)

Designed to build upon MUS 163 and MUS 164 to give a well-structured and advanced knowledge of the various aspects of recording and production with music in a live and studio setting. This includes a working knowledge of microphones, audio mixing boards-analog and digital, recorders, analog and digital, mixing, sound, equalization and the fundamentals of acoustics in studio design.

Contact Hours: 45 Contact Hours.

Recommended Preparation: MUS 161.

MUS 265 - Live Audio Engineering (3)

Teaches the concepts and technical skills of live sound reinforcement. Topics include basic audio concepts, the operation and interconnection of a sound system, signal processing, and live sound recording. Students will participate in special class projects and live sound sessions.

Prerequisite: MUS 164

Contact Hours: 45 Contact Hours.

MUS 284 - Internship (12)

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 business location and with the direct guidance of the instructor.

Prerequisite: No Prerequisites or Recommended Preparation.

NRE - Natural Resources**NRE 100 - Foundations of Forestry (3)**

Presents the principles of forest science, dendrology, forest fire behavior, and silviculture principles.

Contact Hours: 52.5 Contact Hours.

NRE 110 - Forestry Field Research (3)

Introduces research techniques to manage land for a variety of objectives. These include the improvement of wildlife habitat and forest diversity, the prevention of wildfire and insect and disease epidemics, and the scheduling of a sustainable wood supply.

Contact Hours: 60 Contact Hours.

NRE 121 - Introduction to Hydrology (3)

Introduces the movement of ground and surface water. Basic flow equations and graphs are used.

Contact Hours: 52.5 Contact Hours.

Recommended Preparation: MAT 107 or higher

NRE 200 - Ecology: Field Study (3)

Recognizes the importance of ecology in local, regional and global environments. Students travel to different types of ecosystems, study the biotic organisms, complex interactions and ways to protect these valuable habitats. Must have instructor permission to register.

Contact Hours: 90 Contact Hours.

NRE 205 - Wildlife and Fisheries Management Principles (3)

Covers theory, philosophy, and applications for study and management of wildlife and fisheries resources. field and laboratory methods used in wildlife management also covered.

Contact Hours: 52.5 Contact Hours.

NRE 215 - Fire Ecology (3)

Allows students to study the ecological effects of fire. Current information and field experience will be emphasized.

Contact Hours: 52.5 Contact Hours.

NRE 225 - Environmental Education (3)

Introduces students to the history, legislation, principles, and goals of environmental literacy and education. Students will apply this understanding by creating, presenting and evaluating an environmental lesson and environmental education project.

Contact Hours: 45 Contact Hours.

NRE 230 - Wildlife Law Enforcement (3)

Provides an overview of the Wildlife Laws and regulations in the United States. Students examine the many methods of wildlife management, law enforcement, and forensics in this field.

Contact Hours: 45 Contact Hours.

NRE 245 - Avian Conservation/Ornithology (3)

Offers the study of ornithology and the conservation practices associated with management of wild bird populations and their habitats. Current information and field experience will be emphasized.

Contact Hours: 53 Contact Hours.

NRE 265 - Wilderness Education (3)

Introduces students to management and awareness of unique areas. Native American studies and survival in back country are included in this course. Students will participate in a service project and a wilderness overnight as part of this course.

Contact Hours: 53 Contact Hours.

NRE 278 - Seminar (1-3)

Provides students with a vehicle to pursue in-depth exploration of special topics of interest.

Contact Hours: 45 Contact Hours.

See the list of Specialized Natural Resources Courses on the first page of this Course Offerings section.

NRE 280 - Internship (3*)

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 business location and with the direct guidance of the instructor/ coordinator.

NRE 285 - Independent Study (1-6)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. Students are reminded that no more than six (6) credit hours of independent study may be applied to any associate degree program.

NUA - Nurse Aide**NUA 101 - Certified Nurse Aide Health Care Skills (4)**

Prepares the student to perform the fundamental skills of the nurse aide. Basic nursing skills, restorative services, personal care skills; safety and emergency care issues are covered in theory and lab. The student will learn skills that address the mental health needs as well as patient/resident/client rights.

Prerequisite: Completed CCR 092 or place into CCR 093 or CCR 094. Corequisite: NUA 170

Contact Hours: 66 Contact Hours.

NUA 170 - Nurse Aide Clinical Experience (1)

Applies knowledge gained from NUA 101 in a clinical setting.

Prerequisite: Immunizations to meet current Occupational Safety and Health Administration (OSHA) guidelines; Contact individual campus for required information. Corequisite: NUA 101. A passing background check is also required.

Contact Hours: 24 Contact Hours.

NUA 171 - Advanced Nurse Aide Clinical (1)

Prepare the student to move toward more independent functioning within the nurse aide scope of practice, in applying knowledge and skills gained in NUA 101 (p. 215) and NUA 170 (p. 215). The student will learn skills that enhance communication, cultural competency, end of life care, critical thinking and organizational skills.

Contact Hours: 45 Contact Hours.

NUA 175 - Special Topics (.5)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Contact Hours: 7.5 Contact Hours.

NUR - Nursing**NUR 101 - Pharmacology Calculations (1)**

Introduces the nursing student to the concepts and techniques of dosage calculations and medication administration by a variety of routes. Learners will apply basic math concepts to complex conversion of dosages between and among various systems of weights and volumes. Learners will apply critical thinking skills to the calculation and administration of medications.

Contact Hours: 15 Contact Hours (15 lecture hours).

NUR 102 - Alterations in Adult Health I (4)

Introduces the Practical Nurse to basic concepts necessary for assessing and meeting nursing care needs of the adult and older individual. The course focuses on the concepts of acute and chronic illness, pain management, fluid and electrolyte balance, perioperative care, oncology, death and dying, infection and inflammation, and shock syndromes. Common disorders of the musculoskeletal, integumentary, respiratory and reproductive systems are presented. Relevant psychosocial and ethno cultural concepts and legal and ethical implications are integrated throughout.

Prerequisite: Completion of preceding nursing coursework with a grade of "C" or better.

Contact Hours: 60 Contact Hours (60 lecture hours).

NUR 103 - Health Assessment for the Practical Nurse (1)

Provides a foundation in assessment and related therapeutic communication and teaching skills within the legal role of the Practical Nurse (PN). Information is presented to assist the learner in obtaining a health history and in performing a basic assessment on adults and older adults with predictable outcomes. Health maintenance and health promotion concepts are incorporated throughout the course. Relevant mental health, psychosocial and ethno cultural concepts are integrated. Learning theory regarding teaching and learning concepts are presented.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 15 Contact Hours (15 lecture hours).

NUR 104 - Alterations in Adult Health II (5)

Continues the concepts introduced in Alterations in Adult Health I. It introduces the learner to basic concepts necessary for assessing and meeting nursing care needs of the adult and older individual. The course focuses on the common disorders of the neurological, cardiovascular, blood, lymphatic, immune, endocrine, gastrointestinal, renal and urinary systems and the special senses. Relevant psychosocial and ethno cultural concepts are integrated throughout.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 75 Contact Hours (75 lecture hours).

NUR 105 - Practical Nursing Arts and Skills (6)

Introduces the Practical Nursing learner to the principles of basic procedures necessary in caring for clients across the lifespan with stable and predictable outcomes in selected health care settings. Emphasis is placed on use of the nursing process in providing care. Opportunities are provided in the classroom and laboratory to develop competence in the performance of nursing skills. Relevant psychosocial and ethno cultural concepts are integrated throughout. Content regarding multidisciplinary relationships, historical perspectives, and health care delivery systems is presented. (1 or more credits may be given for students completing a Community College of Colorado approved Certified Nursing Assistant program.)

Prerequisite: Completion of preceding nursing coursework with a grade of "C" or better.

Contact Hours: 120 Contact Hours (75 lecture hours, 45 lab hours).

NUR 106 - Medical Surgical Nursing Concepts (7)

NUR 106 is the first medical/surgical nursing course. Building on NUR 109, this course provides for the acquisition of basic medical/surgical nursing theory, as well as application of mental health concepts, communication, collaboration, caring, and critical thinking/clinical reasoning necessary for safe, patient-centered care to a developmentally and culturally diverse adult patient population experiencing various medical/surgical interventions. Incorporates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the nurse. Application of knowledge and skills occurs in the nursing skills laboratory and a variety of clinical settings.

Prerequisite: NUR 109 and NUR 112 and MAT 103

Contact Hours: 213 Contact Hours (51 lecture hours, 13.5 lab hours and 148.5 clinical hours).

Recommended Preparation: HPR 108 (p. 190) or HWE 100 (p. 193).

NUR 109 - Fundamentals of Nursing (6)

Nursing 109 introduces the fundamental concepts necessary for safe, patient-centered nursing care to a diverse patient population while integrating legal and ethical responsibilities of the nurse. Introduces caring, critical thinking, the nursing process, quality improvement, and communication used when interacting with patients and members of the interdisciplinary team, and relates evidence-based nursing practice. Application of knowledge and skills occurs in the nursing skills laboratory and a variety of clinical settings providing care to stable patients with common health alternations.

Contact Hours: 210 Contact Hours (30 lecture hours, 90 lab hours and 90 clinical hours).

NUR 110 - Pharmacology for Practical Nursing (3)

Focuses on the classifications of drugs as they relate to body systems as an introductory pharmacology course. Emphasis is placed on current drug therapy and specific prototype drugs. The discussion of each drug classification concentrates on the mechanism of action, main therapeutic effects, and the adverse reactions produced by the drug. Nursing considerations and patient teaching aspects for each drug classification are stressed throughout. Students learn how to use drug reference sources in gathering data for delivering effective and safe nursing care.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 45 Contact Hours (45 lecture hours).

NUR 111 - Advancement into Practical Nursing (1)

Introduces roles and responsibilities of the graduate Practical Nurse as defined by established standards, including the Colorado Nurse Practice Act. Emphasis is placed on accountability, delegation, and perspectives in health care. Career and job readiness skills are developed.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 15 Contact Hours (15 lecture hours).

NUR 112 - Basic Concepts of Pharmacology (2)

Overview of the basic principles of pharmacology including major drug classifications and prototypes of commonly used

medications. Principles of medication administration include aspects of best practice for safe, quality, patient-centered care. Central points include safety, quality improvement factors in the administration of medications, patient teaching, and variations encountered when administering medications to diverse patient populations across the lifespan.

Contact Hours: 30 Contact Hours (30 lecture hours).

NUR 113 - Basic Concepts of Obstetric Nursing (2)

Introduces the study of families experiencing childbirth. The focus is on normal pregnancy and the physiological and psychological changes during this time including the care of the normal newborn. Selected common complications are discussed. Relevant psychosocial and ethno cultural concepts are integrated throughout. The nursing process is used as a framework to assist the learner in understanding basic maternal/newborn needs and nursing care within the role of the Practical Nurse.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 30 Contact Hours (30 lecture hours).

NUR 114 - Basic Concepts of Pediatric Nursing (2)

Provides the learner with a basic understanding of the care of both the well and sick child within the role of the Practical Nurse. Emphasis is placed on the normal growth and development from infancy to adolescence. Nursing care of common childhood conditions is discussed. Theory is related to the nursing care of the well child, the sick child in various settings, the child with special needs, and the impact of pediatric care on the family. Relevant psychosocial, ethno cultural and family concepts are integrated throughout.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 30 Contact Hours (30 lecture hours).

NUR 115 - Basic Concepts of Mental Health Nursing (1)

Introduces the learner to basic concepts of mental health and illness. The course focuses on clients throughout the lifespan. Emphasis is placed on mental health concepts, selected common psychiatric disorders, treatment modalities and related nursing care. This course is designed to assist the Practical Nurse in caring for clients with varied psychosocial and ethno cultural backgrounds.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 15 Contact Hours (15 lecture hours).

NUR 116 - Basic Concepts of Geriatric Nursing (1)

Introduces the learner to basic knowledge of normal aging, disorders related to aging and nursing care of the older individual within the role of the Practical Nurse. Concepts regarding legal and ethical factors affecting the older individual are presented. Relevant psychosocial and ethno cultural concepts are integrated throughout.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 15 Contact Hours (15 lecture hours).

NUR 131 - Clinical I: Application of Practical Nursing Arts & Skills (3)

Introduces the learner to the health care environment as a foundation course. Enables the learner to begin to apply the nursing process in assessing and meeting the needs of the client within the role of the Practical Nurse. Emphasis is placed on the application of communication skills, basic and advancing nursing procedures, assessment and documentation of care in selected health care settings.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 135 Contact Hours (135 clinical hours).

NUR 132 - Clinical II: Application of Adult Health (2)

Enables the student to develop skills in applying the nursing process in delivery of increasingly complex nursing care. The course is intended to prepare the learner for the entry role of the Practical Nurse in assessing and meeting the needs of adults and older individuals in selected health care settings.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 90 Contact Hours (90 clinical hours).

NUR 133 - Clinical III: Application of Basic Concepts of Maternal-Newborn & Pediatric Nursing (1)

Introduces the learner to the childbearing, newborn, and pediatric client as a foundation course. Provides an opportunity for the learner to apply the principles learned in Basic Concepts of Maternal-Newborn Nursing and in Basic Concepts of Nursing of Children.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 45 Contact Hours (45 clinical hours).

NUR 134 - Clinical IV: Advanced Applications in Adult Health (3)

Provides the learner with the opportunity to enhance the application and integration of nursing theory with multiple clients. The focus is on the scope of practice for the Practical Nurse and the transition from the role of learner to graduate Practical Nurse. Emphasis is on the physical, psychosocial, spiritual, and ethno cultural needs of multiple clients in selected care settings.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 135 Contact Hours (135 clinical hours).

NUR 150 - Maternal Child Nursing (6)

Nursing 150 provides for the acquisition of maternal/child nursing theory, as well as application of mental health concepts, communication, collaboration, caring, and critical thinking/clinical reasoning necessary for safe, family-centered nursing care to childbearing families and children that is developmentally and culturally appropriate. Incorporates evidence-based practice, standards of practice, quality improvement, and legal and ethical responsibilities of the nurse. Application of knowledge and skills occurs in the nursing skills laboratory and in a variety of maternal/child and pediatric clinical settings.

Prerequisite: NUR 109 and NUR 112 and MAT 103

Contact Hours: 171 Contact Hours (49.5 lecture hours, 31.5 lab hours and 90 clinical hours).

Recommended Preparation: HPR 108 (p. 190) or HWE 100 (p. 193).

NUR 169 - Transition into Practical Nursing (4)

Facilitates the transition into the role of the practical nurse with emphasis on distinguishing the defined practical nurse scope of practice related to clinical practice, communication, nursing process, ethical/legal issues, and leadership skills. The student practices in the role of the practical nurse in the associated clinical experience.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 120 Contact Hours (30 lecture hours, 90 clinical hours).

NUR 185 - Independent Study (0.5-6)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 30 Contact Hours PER CREDIT.

NUR 189 - Transition from Licensed Practical Nurse to Associate Degree Nursing Student (4)

Focuses on assisting the Licensed Practical Nurse (LPN) to transition into a new role as an Associate Degree Nursing Student (ADN). Emphasis will be placed on roles and responsibilities of the ADN, nursing process, critical thinking, legal and ethical issues and nursing practice issues related to specialized skills and the care of special populations. The clinical focus will be care of pediatric and obstetric clients.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

Contact Hours: 90 Contact Hours (30 lecture hours, 30 lab hours, 30 clinical hours).

NUR 201 - Intravenous Therapy for Licensed Practical Nurses (5)

Provides Licensed Practical Nurses (LPNs) with an opportunity to expand their nursing roles by learning appropriate procedures for intravenous (IV) therapy and venous blood withdrawal. The course includes lecture, laboratory practice and clinical experiences. The course prepares the student for IV certification under State Board of Nursing Guidelines.

Contact Hours: 90 Contact Hours (50 lecture hours, 17 lab hours, 23 clinical hours).

NUR 206 - Advanced Concepts of M/S Nursing I (6.5)

NUR 206 builds on NUR 106 (p. 216) focusing on advanced concepts of nursing applied to care of patients with high acuity medical/surgical conditions. Builds on medical/surgical nursing theory, mental health concepts, communication, collaboration, caring, and critical thinking/clinical reasoning necessary for safe, patient-centered nursing care to developmentally and culturally diverse adult patients. Incorporates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the professional nurse as applied in a variety of healthcare settings. Application of knowledge and

skills occurs in the nursing skills laboratory and in a variety of clinical settings.

Contact Hours: 202.5 Contact Hours (45 lecture hours, 22.5 lab hours, 135 clinical hours).

Recommended Preparation: Completion of preceding nursing coursework with a grade of "C" or above including BIO 216 (p. 146).

NUR 211 - Psychiatric-Mental Health Nursing (4)

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 psychiatric clinical conditions/disorders.

Contact Hours: 99 Contact Hours (2.7/40.5 theory hours; 1.3/58.5 clinical hours).

Recommended Preparation: Completion of preceding nursing coursework with a grade of "C" or above, including BIO 216 (p. 146).

NUR 212 - Pharmacology (2)

Builds on previously introduced pharmacological concepts and applies that learning to pharmacologic therapy to provide safe, quality, evidence-based nursing care to patients with complex healthcare needs. Focuses on safety and quality improvement factors in the administration of medications within a variety of healthcare systems. Advanced dosage calculations included.

Contact Hours: 30 Contact Hours.

Recommended Preparation: Completion of preceding nursing coursework with a grade of "C" or above, including BIO 216 (p. 146).

NUR 216 - Advanced Concepts of M/S Nursing II (5)

Nursing 216 is a continuation of Nursing 206, focusing on complex medical/surgical conditions of the high acuity patient. Builds on medical/surgical nursing theory, mental health concepts, communication, collaboration, caring, and critical thinking/clinical reasoning necessary for safe, patient-centered nursing care to developmentally and culturally diverse adult patients experiencing high acuity medical/surgical conditions. Incorporates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the professional nurse as applied in the acute care and high acuity settings. Application of knowledge and skills occurs in a variety of clinical settings.

Prerequisite: Completion of preceding nursing coursework with a grade of C or above.

Contact Hours: 156 Contact Hours (34.5 lecture hours, 121.5 clinical hours).

NUR 230 - Transition to Professional Nursing Practice (4)

Nursing 230 is a seminar and practice capstone course that provides an integrative experience applying all dimensions of the professional nurse in the care of diverse patient populations across a variety of healthcare settings. All major concepts of the nursing program are addressed. Leadership and the management of multiple patients are emphasized. Application of knowledge and skills occurs in the clinical setting to facilitate an

effective transition from student to registered professional nurse.

Prerequisite: Completion of preceding nursing coursework with a grade of C or above.

Contact Hours: 132 Contact Hours (24 lecture hours, 108 clinical hours).

NUR 254 - RN Licensing Exam Preparation (1.5)

Will provide a review of the RN NCLEX test plan content areas, review of NCLEX style question formats and the Computerized Adaptive Testing method. Students will review study options for preparing for the RN NCLEX exam and have the opportunity to develop a customized preparation plan for success on the RN NCLEX for Professional Nursing Licensure.

OSH - Occupational Safety Technician

OSH 127 - Human Resources Construction Industry Standards (1)

Provides a 10-Hour Occupational Safety and Health Administration (OSHA) certification course for the construction industry and participants will review the current OSHA standards contained in 29 Code of Federal Regulations (CFR) 1926. Participants that complete the course will receive a certificate of completion from the United States Department of Labor, Occupational Safety and Health Administration. The course is taught by instructors certified by the Occupational Safety and Health Administration.

Contact Hours: 22.5 Contact Hours.

OUT - Outdoor Studies

OUT 126 - Mountain Biking (1)

Introduces basic mountain biking skills and techniques. The primary emphasis is to gain an understanding of the basic principles of mountain biking. Students develop skills and techniques for all riding situations, review bicycle anatomy and basic maintenance and repairs.

Contact Hours: 30 Contact Hours.

OUT 131 - Rock Climbing I (2)

Introduces basic rock climbing, improving dexterity, problem solving skills and the physical work capacity of an individual. Enables the student to gain an understanding of the general principles of climbing; how equipment works and how it is used; basic climbing skills and techniques; safety and climbing etiquette and terminology.

Contact Hours: 45 Contact Hours.

OUT 132 - Rock Climbing II (2)

Introduces lead climbing skills and techniques, problem solving skills and physical fitness. Emphasizes the general principles of lead climbing; proper usage of climbing equipment; development of lead climbing skills and techniques; climbing ethics and safety; and terminology.

Contact Hours: 45 Contact Hours.

Recommended Preparation: OUT 131 or permission of instructor.

OUT 142 - Hiking (1)

Provides skills related to hiking and wilderness travel. Emphasizes hiking skills, proper conditioning, route finding, equipment, and hiking hazards and ethics. The course involves conditioning in the fitness center and weekend hikes.

Contact Hours: 30 Contact Hours.

OUT 143 - Backpacking (2)

Provides skills related to wilderness travel and outdoor adventure. Emphasizes knowledge of backpacking skills, survival techniques, proper physical conditioning, route finding, equipment selection, and an understanding and respect for the environment. The course incorporates lecture and discussion sessions followed by a weekend trip in the mountains.

Contact Hours: 45 Contact Hours.

OUT 151 - Snowshoeing (1)

Emphasizes the basic skills, equipment, clothing and techniques of snowshoeing. It includes the objective dangers involved with winter recreation.

Contact Hours: 30 Contact Hours.

OUT 156 - Survival Plants in Summer I (2)

Introduces the student to the summer season genus and species recognition of wild useful plants (edible, medicinal, poisonous and tool-craft) in all life zone categories (alpine subalpine, montane, foothill and desert) of Colorado. Other topics covered will be summertime identification challenges, macro and micro environments, and dangerous lookalikes, and soils, latitudinal and elevational effects. Note: The Survival Plant series of classes can be taken in any order because each course academia is seasonal specific not nomenclature specific.

Contact Hours: 45 Contact Hours.

OUT 157 - Survival Plants in the Fall (2)

Introduces the student to the fall season genus and species recognition of wild useful plants (edible, medicinal, poisonous and tool-craft) in all life zone categories (alpine subalpine, montane, foothill and desert) of Colorado. Other topics covered will be wilderness survival as it relates to wild useful botany, definition of a "weed", natives vs. non-natives, parasites and saprophytes, poisoning and habitat synergy. Note: The Survival Plant series of classes can be taken in any order because each course academia is seasonal specific not nomenclature specific.

Contact Hours: 45 Contact Hours.

OUT 158 - Survival Plants in Spring I (2)

Introduces the student to spring season genus and species recognition of wild useful plants (edible, medicinal, poisonous and tool-craft) in all life zone categories (alpine subalpine, montane, foothill and desert) of Colorado. Other topics covered will be early ethno botany, botanical nomenclature, annuals, biennials and perennials, harvesting ethic, rare plants and seasonal changes. Note: The Survival Plant series of classes can be taken in any order because each course academia is seasonal specific not nomenclature specific.

Contact Hours: 45 Contact Hours.

OUT 201 - Scuba Diving (1)

Provides basic instruction in scuba diving. Focuses on the knowledge and skills related to swimming and snorkeling, diving equipment, communications, the environment, safety, dive

tables, and other pertinent information a student needs for safe scuba diving. This course prepares the student for open-water Professional Association of Diving Instructors (PADI) certification.

Contact Hours: 30 Contact Hours.

Recommended Preparation: PED 108 or equivalent.

OUT 202 - Open Water Diver (1)

Requires student divers to demonstrate mastery of performance requirements for four (4) different open water dives to become a certified open water diver through the Professional Association of Diving Instructors (PADI).

Contact Hours: 30 Contact Hours.

Recommended Preparation: OUT 201 (p. 219) or equivalent

PAR - Paralegal

PAR 115 - Introduction to Law (3)

Provides an understanding of the role of paralegals, issues facing paralegals, the working of the legal system, and ethical questions. Legal terminology and an overview of the substantive areas of law will be discussed.

Contact Hours: 45 Contact Hours.

PAR 116 - Torts (3)

Focuses on tort law, including negligence, intentional torts, and strict liability with an emphasis on personal injury litigation.

Contact Hours: 45 Contact Hours.

PAR 117 - Family Law (3)

Emphasizes domestic law, common property, dissolutions, adoptions, legal separation, and other family law issues.

Contact Hours: 45 Contact Hours.

PAR 118 - Contracts (3)

Examines the basic principles of contract law.

Contact Hours: 45 Contact Hours.

PAR 125 - Property Law (3)

Focuses on real estate law, ownership, sale, leasing, financing and government regulation of land.

Contact Hours: 45 Contact Hours.

PAR 126 - Administrative Law (3)

Introduces administrative and regulatory agencies, their jurisdiction, rule-making and decision-making processes.

Prerequisite: PAR 115

Contact Hours: 45 Contact Hours.

PAR 127 - Legal Ethics (3)

Explores the parameters of professional responsibilities and value systems for paralegals and related occupations.

Contact Hours: 45 Contact Hours.

PAR 201 - Civil Litigation (3)

Focuses on an intensive study of the legal process including the Federal and Colorado Rules of Civil Procedure.

Contact Hours: 45 Contact Hours.

PAR 202 - Evidence (3)

Introduces the student to State and Federal Rules of Evidence and application to the trial process.

Prerequisite: PAR 115

Contact Hours: 45 Contact Hours.

PAR 205 - Criminal Law (3)

Introduces basic concepts of criminal law and criminal procedure, including Colorado statutes and Rules of Procedure.

Prerequisite: PAR 115

Contact Hours: 45 Contact Hours.

PAR 206 - Business Organizations (3)

Focuses on the study of the major types of business organizations.

Prerequisite: PAR 115

Contact Hours: 45 Contact Hours.

PAR 208 - Probate and Estates (3)

Provides an understanding of the creation and administration of an estate, including wills and trusts and the probate process.

Prerequisite: PAR 115

Contact Hours: 45 Contact Hours.

PAR 209 - Constitutional Law (3)

Emphasizes the study of the powers of government as they are allocated and defined by the United States Constitution.

Contact Hours: 45 Contact Hours.

PAR 211 - Legal Research (3)

Introduces the student to basic legal research tools, including statutes, digests, case law, citators, encyclopedias, dictionaries, and online data bases.

Prerequisite: PAR 115

Contact Hours: 45 Contact Hours.

PAR 212 - Legal Writing (3)

Enables the student to practice the content and conventions of legal writing.

Prerequisite: ENG 121, PAR 115, and PAR 211

Contact Hours: 45 Contact Hours.

PAR 215 - Alternative Dispute Resolution (3)

Introduces the student to negotiating, mediation, arbitration and other forms of dispute resolution.

Contact Hours: 45 Contact Hours.

PAR 216 - Employment Law (3)

Provides an understanding of current legal issues in the area of employer/employee relationships.

Prerequisite: PAR 115

Contact Hours: 45 Contact Hours.

PAR 217 - Environmental Law (3)

Covers state and federal laws concerning the environment, including chemical safety laws, workplace safety, and hazardous waste.

Contact Hours: 45 Contact Hours.

PAR 218 - Bankruptcy Law (3)

Focuses on the federal and state laws and procedures involving bankruptcy.

Prerequisite: PAR 115

Contact Hours: 45 Contact Hours.

PAR 219 - E-Discovery and Litigation Technology (3)

Provides students with an understanding of the discovery process of electronically stored information (ESI) issues and software relating to complex litigation.

Prerequisite: PAR 201

Contact Hours: 45 Contact Hours.

PAR 227 - Immigration Law (3)

Provides an understanding of the United States Immigration Laws.

Contact Hours: 45 Contact Hours.

Recommended Preparation: PAR 115 (p. 220)

PAR 228 - Intellectual Property (3)

Covers the federal and state laws regarding intellectual property.

Contact Hours: 45 Contact Hours.

PAR 289 - Capstone (3)

Emphasizes a synthesis of the information and skills that students learned throughout their paralegal studies.

Contact Hours: 45 Contact Hours.

PED - Physical Education**PED 101 - Conditioning Lab (1)**

Offers an independent self-paced format of conditioning exercises to meet individual needs. Emphasizes the value of lifetime fitness and its contribution to achieving personal health and wellness. Students utilize cardio respiratory, muscular strength and endurance exercises to promote positive changes in health-related fitness components.

Contact Hours: 30 Contact Hours.

PED 102 - Weight Training I (1)

Offers basic instruction and practice in weight training. Students utilize weight-training equipment in accordance to their abilities and goals. Emphasizes weight training equipment orientation, correct lifting techniques, and basic program design for men and women.

Contact Hours: 30 Contact Hours.

PED 103 - Weight Training II (2)

Offers guided instruction and independent practice in weight training for men and women. Students practice various weight-training techniques in accordance with their abilities. Emphasizes physiological considerations, equipment orientation, correct lifting techniques, program design, and nutrition.

Contact Hours: 45 Contact Hours.

PED 104 - Cross Training (1)

Introduces basic cross-training techniques designed to improve physical work capacity of an individual. Enables the student to gain an understanding of the basic principles of cross training,

the effects cross training has upon the body's energy systems and muscles, program design and terminology.

Contact Hours: 30 Contact Hours.

PED 122 - Step Aerobics (1)

Introduces basic step aerobics and exercise techniques to improve physical fitness. Emphasizes the basic principles of step aerobics including the effects upon the cardio-respiratory system and skeletal muscles, various step patterns and choreography.

Contact Hours: 30 Contact Hours.

PED 140 - Body Sculpting and Toning (1)

Introduces exercise techniques to improve overall physical fitness. Emphasizes the interaction between cardiovascular conditioning, muscular strength and endurance, flexibility and program design integrated into an aerobic format. Focuses on blending together different combinations and sequences of exercises while conditioning the entire body. Students exercise using various types of resistance equipment.

Contact Hours: 30 Contact Hours.

PED 143 - Yoga I (1)

Offers a guided instruction in yoga. Students practice yoga according to their individual fitness levels and abilities. Emphasizes enhancing general health and well being through the performance of yoga strength, flexibility, balance and relaxation techniques and exercises.

Contact Hours: 30 Contact Hours.

PED 144 - Yoga II (1)

Continues to build on the concepts of basic yoga. Increases awareness of yoga including physical and mental benefits.

Contact Hours: 30 Contact Hours.

PED 151 - Walking and Jogging (1)

Enables the student to understand the values in walking and jogging. Safety precautions and emphasis on personal programs are emphasized.

Contact Hours: 30 Contact Hours.

PED 161 - Tai Chi I (1)

Introduces Tai Chi as an expression of understanding of self-control, exercise and self-defense. The primary emphasis is to gain an understanding of the history (origins and changes) of Tai Chi, the movements and their names, application of movements and terminology.

Contact Hours: 30 Contact Hours.

PED 163 - Martial Arts I (1)

Introduces basic martial arts techniques and forms designed to improve the physical and mental capacity of an individual. Enables the student to gain an understanding of the basic philosophies and concepts around the martial arts and the approach to ethics. Provides a clear-cut guide for developing a powerful sense of character and will.

Contact Hours: 30 Contact Hours.

PED 202 - Golf I (1)

Introduces a basic course in golf designed for those who have had little or no formal instruction or for those with some experience who are interested in improving some aspect of their game. Includes driving range, putting green, and on-course play.

Contact Hours: 30 Contact Hours.

PED 211 - Bowling (1)

Introduces bowling fundamentals to improve the student's skill level. The primary emphasis is on teaching the student the elements of bowling, rules and regulations, footwork, courtesies, delivery, selection of ball, scoring, and team individual competition.

Contact Hours: 30 Contact Hours.

PED 230 - Volleyball I (1)

Introduces and improves student skill level in volleyball. The primary emphasis is on teaching the student the elements of volleyball including rules, offensive and defensive play, passing, serving, setting, attacking, team play and game strategies.

Contact Hours: 30 Contact Hours.

PHI - Philosophy

PHI 111 - Introduction to Philosophy (3)

Introduces significant human questions and emphasizes understanding the meaning and methods of philosophy. Includes human condition, knowledge, freedom, history, ethics, the future, and religion.

Prerequisite: CCR 092, CCR 093, or CCR 094, or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH3).

Contact Hours: 45 Contact Hours.

PHI 112 - Ethics (3)

Examines human life, experience, and thought in order to discover and develop the principles and values for pursuing a more fulfilled existence. Theories designed to justify ethical judgments are applied to a selection of contemporary personal and social issues.

Prerequisite: CCR 092, CCR 093, or CCR 094, or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH3).

Contact Hours: 45 Contact Hours.

PHI 113 - Logic (3)

Studies effective thinking using language-oriented logic. Provides tools and develops skills for creative and critical thinking. Emphasizes the development of decision-making and problem solving.

Prerequisite: CCR 092, CCR 093, or CCR 094, or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH3).

Contact Hours: 45 Contact Hours.

PHI 114 - Comparative Religions (3)

Introduces students to the major world religions from both the Eastern and Western world such as Hinduism, Buddhism, Confucianism, Taoism, Zoroastrianism, Judaism, Christianity, Islam, Bahá'í, and influential pre-literate traditions. Utilizes religious studies methods (historical, sociological, legal, psychological, and phenomenological), to understand the historical development of each religious tradition in terms of communities, cultural context, and modern manifestations; paying particular attention to differences between sects,

denominations, schools, and factions within each tradition.

Focus will include the examination of the charismatic leaders, prophets, and narratives that inform the worldview of each tradition.

Prerequisite: CCR 092, CCR 093, or CCR 094, or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH3).

Contact Hours: 45 Contact Hours.

PHI 115 - World Religions - West (3)

Introduces students to religions of the Western world: Zoroastrianism, Judaism, Christianity, Islam, Bahá'í, and influential pre-literate traditions. Utilizes religious studies methods (historical, sociological, legal, psychological, and phenomenological), to understand the historical development of each religious tradition in terms of communities, cultural context, and modern manifestations; paying particular attention to differences between sects, denominations, schools, and factions within each tradition. Focus will include the examination of the charismatic leaders, prophets, and narratives that inform the worldview of each tradition.

Prerequisite: CCR 092, CCR 093, or CCR 094, or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH3).

Contact Hours: 45 Contact Hours.

PHI 116 - World Religions - East (3)

Introduces students to religions of the Eastern world: Hinduism, Buddhism, Jainism, Taoism, Confucianism, Sikhism, Shinto, and influential pre-literate traditions. Utilizes religious studies methods (historical, sociological, legal, psychological, and phenomenological), to understand the historical development of each religious tradition in terms of communities, cultural context, and modern manifestations; paying particular attention to differences between sects, denominations, schools, and factions within each tradition. Focus will include the examination of the charismatic leaders, prophets, and narratives that inform the worldview of each tradition.

Prerequisite: CCR 092, CCR 093, or CCR 094, or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH3).

Contact Hours: 45 Contact Hours.

PHI 120 - Applied Ethics (3)

Focuses on different applications of ethics in contemporary society and disciplines, including business ethics, biomedical ethics, genetic ethics, issues of dental ethics, and other valid applications.

Contact Hours: 45 Contact Hours.

PHI 124 - Introduction to Islam (3)

Introduces the Islamic religious tradition and considers its significance in the modern world. The course investigates the history of Islam, Islamic beliefs and practices, Islamic sects, Sufism, and contemporary issues of Islamic extremism, women in Islam, and Islam in the West.

Contact Hours: 45 Contact Hours.

PHI 142 - New Testament (3)

This course surveys the literature of the early Christian era, from its inception to approximately 150 C.E. The New Testament as well as selected non-canonical writings from the period are examined. The course focuses on the interpretation of these texts in light of the cultural milieu from which they arose. Particular attention is paid to the influence of ancient literary conventions upon the Christian writers of this time.

Contact Hours: 45 Contact Hours.

PHI 201 - Social and Political Philosophy (3)

Addresses a single topic among those relevant to social and political philosophy such as political rights, political freedom, social obligations, or democracy.

Contact Hours: 45 Contact Hours.

PHI 203 - Introduction to Buddhism (3)

Introduces students to the history, philosophy and practices of the Buddhist tradition. This course in no way intends to be comprehensive but rather surveys the many manifestations of Buddhism through an exploration of foundational aspects, the evolution and spread of Buddhist philosophical and spiritual ideals, and aspects of Buddhism as it exists in the modern world.

Contact Hours: 45 Contact Hours.

PHI 205 - Business Ethics (3)

Analyzes ethical behavior for businesses. The premise is that ethics deals with right and wrong standards of behavior that are determined by the ethical and social expectations of society in general, and further, that we expect responsible people to observe the ethical standards of our society. A case approach is used throughout the course. The ethical issues involve trade-offs among ethical decisions and economics, legal, social, and cultural concepts.

Contact Hours: 45 Contact Hours.

PHI 213 - Symbolic Logic (3)

Covers basic information in semantics and syntax of sentential and predicate logic, construction of truth trees and derivations of natural deductive systems.

Contact Hours: 45 Contact Hours.

PHI 214 - Philosophy of Religion (3)

Focuses on the critical examination of the fundamental concepts, ideas, and implications of religion. Includes the nature of God, the varieties of religious experience, argument concerning God's existence, the Problem of Evil, faith and reason, religion and human destiny, and the connection between religion and ethics.

Prerequisite: CCR 092, CCR 093, or CCR 094, or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH3).

Contact Hours: 45 Contact Hours.

PHI 215 - The Meaning of Life (3)

Examines theistic and non-theistic, subjective and objective approaches to the question: What is the meaning of life? Additionally, the question itself is dissected, as students are challenged to understand what is really being sought and how to begin formulating an answer.

Contact Hours: 45 Contact Hours.

PHI 218 - Environmental Ethics (3)

Critically analyzes theories of value of the natural world. Topics include the relation between scientific and moral principles; theories of the moral worth of persons, animals, plants and other natural objects; historical, religious and cultural influences on conceptions of nature: alternative accounts of human relationships and responsibilities to nature, including deep ecology and eco-feminism; and the connection between moral and political values and economic policies.

Prerequisite: CCR 092, CCR 093, or CCR 094, or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH3).

Contact Hours: 45 Contact Hours.

PHI 220 - Philosophy of Death and Dying (3)

Explores the major philosophical questions surrounding death and dying: the metaphysical arguments for and against the existence of a soul and life after bodily death, the epistemological assessment of arguments for the soul and life after death, the ethical justifications taken on positions such as rational suicide and physician assisted suicide, as well as a focus on philosophy's existentialist contribution to questions about the meaning of life and the meaning of death.

Prerequisite: CCR 092, CCR 093, or CCR 094, or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH3).

Contact Hours: 45 Contact Hours.

PHT - Pharmacy Technician**PHT 111 - Orientation to Pharmacy (3)**

Orients students to the work of pharmacy technicians and the context in which a technicians' work is performed. Students learn the concept of pharmaceutical care and the technicians' general role in its delivery. The development of new drug products is discussed as well as a variety of issues that touch on attitudes, value and beliefs of success for pharmacy technicians. Students gain an appreciation for the value of obtaining technician certification, and the benefits of technicians' active involvement in local, state, and national pharmacy organizations.

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 112 - Pharmacy Law (2)

Introduces the pharmacy technician student to the profound influence that drug laws, standards, and regulations have on practice. Students learn to abide by the laws, regulations and standards that govern the preparation and dispensing of drugs.

Contact Hours: 30 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 113 - Pharmacy Calculations (1)

Provides the pharmacy technician student with a math preview necessary for pharmaceutical calculations and reviews necessary pharmaceutical terminology.

Contact Hours: 22.5 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 114 - Computer Skills for Pharmacy Technicians (1)

Focuses on the practice of pharmacy and the multiple operations contributing to safe and effective practices of dispensing, distribution, administration and prescribing of pharmaceuticals, medical supplies, equipment and devices. Pharmacy technicians are delegated certain operations and technical functions based upon established policies and procedures. Computers are utilized to contribute to the efficient delivery of these operations. Pharmacy technicians require a basic understanding of computer terminology and applications of the computer and the roles and responsibilities of pharmacist and pharmacy technicians in computer-based systems. Includes integration of an actual pharmacy operation application and allow students "hands-on" technical experience.

Contact Hours: 22.5 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 115 - Pharmacology I (3)

Provides the basic concepts of normal body function as well as the diseases which impact the various body systems and the drugs used to treat such diseases. Emphasizes disease state management and drug therapy.

Contact Hours: 45 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 116 - Institutional Pharmacy (3)

Provides a basic understanding of general and specific tasks as well as the responsibilities involved in the practice of pharmacy in an institutional pharmacy setting. Emphasizes in-patient hospital pharmacy practice and other related practice settings (such as Homecare and Nursing Home or Long-Term Care). A laboratory experiential component provides a "hands-on" experience in the preparation of intravenous admixtures, aseptic technique, unit-dose distribution, dispensing for greater than 24 hours.

Prerequisite: Prerequisite or corequisite of PHT 113

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above) and a grade of "C" or better in PHT 113.

PHT 117 - Communication for Pharmacy Technicians (1)

Provides the pharmacy technician student with an analysis of interpersonal communications (including principles, practices, and procedures) as well as an in-depth discussion of the practical application of communication to pharmacy practice. The analysis of interpersonal communications component includes such topics as communication perceptions and barriers, listening, responding, assertiveness and non-verbal communication. The practical application component includes such techniques as role-playing, group discussion and interviewing.

Contact Hours: 15 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 118 - Pharmacology II (3)

Serves as the second part of the two-part presentation of the basic concepts of normal body function. Reviews the disease states which impact the various body systems and the drugs used to treat such diseases. Emphasizes disease state management and drug therapy.

Prerequisite: Prerequisite or corequisite of PHT 115

Contact Hours: 45 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 119 - Community Pharmacy (3)

Provides a basic understanding of both general and specific tasks and responsibilities involved in the practice of pharmacy in a community setting. Emphasizes chain and independent community pharmacy practices and other related practice settings (such as consultant pharmacy, mail order pharmacy and nuclear pharmacy). Enables the student to obtain hands-on experience in the important technical duties of dispensing and compounding. Utilizes a lecture-informal discussion format combined with a series of practice skills laboratory sessions.

Prerequisite: Prerequisite or corequisite of PHT 113

Contact Hours: 67.5 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 120 - Medical Insurance Procedures (1)

Provides a basic introduction to pharmacy reimbursement services. Defines and presents the processes involved in reimbursement for pharmacy products and services. Examines the health care insurance industry along with an overview of the three core functions of pharmacy reimbursement services - patient admission, verification of insurance, and billing procedures. Integrates an actual pharmacy operation application and allows students hands-on technical experience.

Contact Hours: 15 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 170 - Pharmacy Clinical: Institutional (4)

Provide students with hands on experience in an institutional pharmacy setting. The course involves a total of 160 hours. Students must be supervised by a licensed pharmacist or qualified designee, and are expected to participate in activities delineated in the Clinical Site Manual, such as dispensing, compounding, inventory handling and control, drug distribution, and/or preparation of intravenous products. The preceptor, student, and instructor complete evaluations at completion of the rotation.

Prerequisite: PHT 111, PHT 112, PHT 113, PHT 114, PHT 115, PHT 116, PHT 117, PHT 118, PHT 119, and PHT 120

Contact Hours: 150 Contact Hours.

Recommended Preparation: A grade of "C" or better in PHT 111 - PHT 120.

PHT 171 - Pharmacy Clinical: Community (4)

Provide students with hands on experience in a community pharmacy setting. The course involves a total of 160 hours. Students must be supervised by a licensed pharmacist or

qualified designee, and are expected to participate in activities delineated in the Clinical Site Manual, such as dispensing, inventory handling and control, drug distribution, processing of third-party claims, and communication with patients. The preceptor, student, and instructor complete evaluations at the completion of the rotation.

Prerequisite: PHT 111, PHT 112, PHT 113, PHT 114, PHT 115, PHT 116, PHT 117, PHT 118, PHT 119, and PHT 120

Contact Hours: 150 Contact Hours.

PHT 205 - Certification Review (.5)

Prepares the student for the national Pharmacy Technician Certification Examination.

Prerequisite: Completion of PHT certificate program or prior work experience as a pharmacy technician

Contact Hours: 8 Contact Hours.

See the list of Specialized Pharmacy Technician Courses on the first page of this Course Offerings section.

PHT 207 - Drug Classification (3)

Emphasizes the drug classes, such as over-the-counter vs. prescription drugs, scheduled drugs, and the laws pertaining to each. Includes the drug development process, the different pregnancy classifications and the degree of potential harm for each class, and the commonly used drugs that can be addictive, abused and potentially lethal. Examines dosage forms, routes of administration, selection and recommendation of OTC drugs and natural products, and memorize trade and generic names.

Prerequisite: PHT115 or PHT118

Contact Hours: 45 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHT 235 - Pharmaceutical Calculations & Compounding Techniques (4)

Develops the skills necessary for performing calculations in pharmacy practice and the compounding of sterile and nonsterile products. Includes a review of basic mathematical skills. Enables the student to solve problems involving calculations pertinent to the preparations of pharmaceuticals. These skills are put to practical use in the compounding portion of this course. Preparation of sterile products, parenteral admixtures, TPN solutions and chemotherapeutics, using proper aseptic techniques is taught. The safe handling of antineoplastics and other hazardous drug products, as well as special drug storage requirements is learned. Emphasizes the importance of accuracy, quality and infection control. Use and maintenance of equipment such as Laminar Flow Hoods, autoinjectors and pumps is discussed.

Contact Hours: 75 Contact Hours.

Recommended Preparation: Placement into CCR 092 (or above) and MAT 050 (or above).

PHY - Physics

PHY 105 - Conceptual Physics with Lab (4)

Focuses on mechanics, heat, properties of matter, electricity and magnetism, light, and modern physics. Incorporates laboratory experience.

Prerequisite: MAT 050 or higher and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 75 Contact Hours (45 lecture hours and 30 lab hours).

PHY 107 - Energy Science and Technology with Lab (4)

Explores the science of energy and energy technologies, with a focus on renewable energy resources and clean technologies. It provides a background in the physics of energy, energy transfer, and the current state of technology. Students will evaluate the future utilization of renewable technologies. Activities may include investigating conservation of energy, mechanical, electrical, heat and fluid power systems; energy transfer and loss; understanding energy audits; testing solar collectors and wind generators; investigating hydrogen fuel cells.

Prerequisite: MAT 050 or higher and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 75 Contact Hours (45 lecture hours and 30 lab hours).

PHY 111 - Physics: Algebra-Based I with Lab (5)

Enables the student to explore the physical world through reasoning, problem solving, mathematics, and experimentation. Examines kinematics, force, circular motion, energy, momentum, torque, rotational dynamics, simple harmonic motion, temperature, heat, and thermodynamics. The concepts and theories presented are explored through demonstrations and hands-on experiments. This is a general physics course that is recommended for the health sciences and other interested students. Students entering engineering or one of the advanced sciences should register for PHY 211.

Prerequisite: MAT 121 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (60 lecture hours, 30 lab hours).

PHY 112 - Physics: Algebra-Based II with Lab (5)

Expands upon PHY 111 and covers sound waves, electric fields, electric circuits, magnetic fields, light and optics, and modern physics. Explores the concepts and theories presented in class through demonstrations and hands-on experiments.

Prerequisite: PHY 111 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (60 lecture hours, 30 lab hours).

PHY 211 - Physics: Calculus-Based I with Lab (5)

Enables the student to examine the physical world through reasoning, problem solving, mathematics, and experimentation. Covers kinematics, force, gravity, energy, momentum, torque, rotational dynamics, and may include fluids and thermodynamics. The concepts and theories presented in class are explored through demonstrations and hands-on experiments. This first semester calculus-based physics course is recommended for students entering engineering or one of the advanced sciences.

Prerequisite: MAT 201 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 105 Contact Hours (60 lecture hours, 45 lab hours).

PHY 212 - Physics: Calculus-Based II with Lab (5)

Expands upon PHY 211 and examines waves, electric fields, electric circuits, magnetic fields, light and optics, and modern physics. The concepts and theories presented in class are explored through demonstrations and hands-on experiments.

Prerequisite: PHY 211 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 105 Contact Hours (60 lecture hours, 45 lab hours).

PHY 213 - Calc-Base III: Modern (3)

Expands upon PHY 212 and explores twentieth century advances in physics. Topics may include special and general relativity, quantum theory, atomic physics, solid state physics, nuclear physics, semiconductor physics, and cosmology.

Prerequisite: PHY 212 and CCR 092, CCR 093, or CCR 094 or equivalent testing scores. CCR courses may be taken concurrently.

Contact Hours: 45 Contact Hours.

POS - Political Science**POS 105 - Introduction to Political Science (3)**

Focuses on a survey of the discipline of political science, including political philosophy and ideology, democratic and non-democratic governments, and processes, and international relations.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

POS 111 - American Government (3)

Includes the background of the U.S. Constitution; the philosophy of American government; general principles of the Constitution; federalism; and civil liberties. Examines public opinion and citizen participation, political parties, interest groups, and the electoral process, and the structure and functions of the national government.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

POS 125 - American State and Local Government (3)

Emphasizes the structure and function of state, county, and municipal governments including their relations with each other and with national government. Includes a study of Colorado government and politics.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

POS 136 - The American Presidency (3)

Focuses on the office of the president as a branch of government. Examines the individuals who have occupied and shaped the presidency, and changes in the office itself.

Contact Hours: 45 Contact Hours.

POS 205 - International Relations (3)

Examines relationships among modern nation states. Topics include diplomacy, nationalism, ideologies, power and influence, conflict and cooperation, the role of non-state actors, the international economy and theoretical attempts to understand international behavior.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

POS 215 - Current Political Issues (3)

Incorporates an in-depth analysis of critical issues in political science. Examines current topics and issues.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

POS 225 - Comparative Government (3)

Focuses on a comparison of the basic features of selected developed and developing countries. Topics include ideologies, political parties, interest groups, and governmental institutions.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS1).

Contact Hours: 45 Contact Hours.

PPT - Powerplant Technology**PPT 105 - Basic Plant Operation (2)**

Provide an introduction to the major systems and components that make up a modern power plant. Students learn how electric power is produced and distributed; how boilers, turbines, and condensers operate; and what the general responsibilities of plant operators are during all phases of plant operation. Specific attention is given to the flow of water and steam through the

steam cycle, how combustion occurs, types of boilers and turbines, operation of steam cycle support systems, bearings and lubrication, turbine control, pollution control, and plant safety.

Contact Hours: 45 Contact Hours.

PPT 116 - Instrumentation and Control (3)

Introduces students to power plant process control. Emphasis will center on the full range of pertinent equipment. Students will learn how to use pneumatic and electronic controls, actuators, sensors, transmitters, relays, and indicators. Students are introduced to terms such as setpoint, control point, deviation, proportional band, reset, rate, span, feedback, and feedforward. Combustion control diagrams for the following systems are also explained: a typical three-element boiler drum level control system, a fuel and air flow metering and control system, a typical hotwell level control system, and a steam temperature control system.

Prerequisite: ELT 106

Contact Hours: 67.5 Contact Hours.

PSY - Psychology

PSY 101 - General Psychology I (3)

Focuses on the scientific study of behavior including motivation, emotion, physiological psychology, stress and coping, research methods, consciousness, sensation, perception, learning and memory.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

PSY 102 - General Psychology II (3)

Focuses on the scientific study of behavior including cognition, language, intelligence, psychological assessment, personality, abnormal psychology, therapy, life span development and social psychology.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

Recommended Preparation: PSY 101.

PSY 205 - Psychology of Gender (3)

Examines gender comparisons in work, courtship, family life and sexual behavior throughout the lifespan.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

PSY 207 - Intro Forensic Psychology (3)

Introduction to Forensic Psychology is a course in an overview of Forensic Psychology. As such it explores both current research and practice in five areas. These areas are police psychology, criminal psychology, victimology, correctional psychology and the interface of psychology and the courts. The course facilitates

an understanding of the numerous careers related to forensic psychology, how to prepare for them and current research and practice in each of the five broad areas of forensic psychology.

Contact Hours: 45 Contact Hours.

PSY 217 - Human Sexuality (3)

Surveys physiological, psychological and psychosocial aspects of human sexuality. Topics include relationships, sexual identity, and sexual health.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

PSY 226 - Social Psychology (3)

Focuses on the behavior of humans in social settings including attitudes, aggression, conformity, cooperation and competition, prejudice and interpersonal attraction.

Prerequisite: PSY 101 or PSY 102 and CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently. Corequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

PSY 227 - Psychology of Death and Dying (3)

Examines the philosophies of life and death emphasizing dying, death, mourning and the consideration of one's own death.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

PSY 235 - Human Growth and Development (3)

Examines human development from conception through death emphasizing physical, cognitive, emotional, and psychosocial factors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

PSY 238 - Child Development (3)

Focuses on the growth and development of the individual from conception through childhood, emphasizing physical, cognitive, emotional, and psychosocial factors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

PSY 239 - Adolescent and Adult Psychology (3)

Examines growth and development of the individual from adolescence to death, emphasizing physical, cognitive, emotional and psychosocial factors.

Contact Hours: 45 Contact Hours.

PSY 249 - Abnormal Psychology (3)

Examines abnormal behavior and its classifications, causes, treatment and prevention.

Prerequisite: PSY 101 or PSY 102 and CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently. Corequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

PSY 258 - Introduction to Neuropsychology (3)

Focuses on introduction to basic neuropsychological terms and concepts with emphasis on application of thinking and behavior in humans.

Prerequisite: PSY 101 or PSY 102

Contact Hours: 45 Contact Hours.

PSY 265 - Psychology of Personality (3)

Examines the structure, function, and development of personality. Investigates the major contemporary theories of personality. Covers psychodynamic, behavioral, cognitive-social learning, humanistic, trait, and, optionally, neurobiological, existential, and/or Eastern perspectives. The underlying assumptions and research support for these theories are appraised. Enables the student to gain an appreciation of the value of alternative theoretical approaches to this sub field of psychology.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing score. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

REA - Reading

REA 112 - Speed Reading (2)

Improves reading comprehension and speed of reading for students who want to enhance skills for success in college or career environments.

Prerequisite: Appropriate assessment scores.

Contact Hours: 30 Contact Hours.

REC - Recreation

REC 210 - Principles of Outdoor Recreation (3)

Includes lecture and practical outdoor experience relating to problems and trends in outdoor recreation.

Contact Hours: 60 Contact Hours.

REC 212 - Outdoor Recreation Programming (3)

Provides effective planning, staffing, and budgeting for the outdoor experience for the maximum opportunity for a successful program. Issues of marketing and promotion, agency coordination, risk management, environmental impact, logistics and the customer needs and expectations are addressed.

Contact Hours: 45 Contact Hours.

RUS - Russian

RUS 101 - Conversational Russian I (3)

Introduces beginning students to conversational Russian and focuses on understanding and speaking Russian. Covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

Contact Hours: 45 Contact Hours.

RUS 102 - Conversational Russian II (3)

Continues the sequence for students who wish to understand and speak Russian. Covers basic conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: RUS 101

RUS 111 - Russian Language I (5)

Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading, and writing the Russian language. Note: The order of the topics and methodology will vary according to individual texts and instructors.

Contact Hours: 75 Contact Hours.

RUS 112 - Russian Language II (5)

Continues Russian I in the development of functional proficiency in listening, speaking, reading, and writing the Russian language. Note: The order of the topics and methodology will vary according to individual texts and instructors.

Contact Hours: 75 Contact Hours.

Recommended Preparation: RUS 111

RUS 201 - Conversational Russian III (3)

Continues the sequence for students who wish to advance their study of understanding and speaking Russian. Includes intermediate level vocabulary, grammar, and expressions.

Contact Hours: 45 Contact Hours.

Recommended Preparation: RUS 102

RUS 202 - Conversational Russian IV (3)

Continues the sequence for students who wish to advance their study of understanding and speaking Russian. Focuses on intermediate level conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: RUS 201 or equivalent.

RUS 211 - Russian Language III (3)

Continues Russian Language I and II in the development of increased functional proficiency in listening, speaking, reading, and writing the Russian language. Note: The order of topics and methodology will vary according to individual texts and instructors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently. Corequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

Recommended Preparation: RUS 112 (p. 228) or equivalent.

RUS 212 - Russian Language IV (3)

Continues Russian Language I, II and III in the development of increased functional proficiency in listening, speaking, reading, and writing the Russian language. Note: The order of topics and methodology will vary according to individual texts and instructors.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently. Corequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

Recommended Preparation: RUS 211 (p. 228) or equivalent.

SCI - Science**SCI 155 - Integrated Science I with Lab (4)**

Examines the nature of energy and matter, their interactions and changes, and the application of fundamental concepts to the study of our natural world. These concepts will be explored in hands-on laboratory experiments. This course integrates the fundamental concepts and ideas about the nature of physics and chemistry with the natural world.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1).

Contact Hours: 90 Contact Hours (45 lecture hours, 45 lab hours).

SCI 155 and SCI 156 are intended for Early Childhood Education & Elementary Education Students ONLY. Students MUST pass BOTH SCI 155 & 156 with a C or higher to satisfy the gtPathways science requirement. Students looking to take these courses should do so understanding that these courses are only guaranteed transferable for students following the subsequent agreements: Early Childhood Teacher Education or Elementary Teacher Education and should seek advisement from the four-year college/university and Front Range Community College advisors before enrolling.

SCI 156 - Integrated Science II with Lab (4)

Examines earth and biological systems, living and non-living environments, through the application of fundamental energy and matter concepts. These systems and concepts will be explored in hands-on laboratory experiments.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SC1) .

Contact Hours: 90 Contact Hours (45 lecture hours, 45 lab hours).

SCI 155 and SCI 156 are intended for Early Childhood Education & Elementary Education Students ONLY. Students MUST pass BOTH SCI 155 & 156 with a C or higher to satisfy the gtPathways science requirement. Students looking to take these courses should do so understanding that these courses are only guaranteed transferable for students following the subsequent agreements: Early Childhood Teacher Education or Elementary Teacher Education and should seek advisement from the four-

year college/university and Front Range Community College advisors before enrolling.

SOC - Sociology**SOC 101 - Introduction to Sociology I (3)**

Examines the basic concepts, theories, and principles of sociology as well as human culture, social groups, and the social issues of age, gender, class, and race.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 102 - Introduction to Sociology II (3)

Examines social institutions and organizations from the macro perspective. Emphasizes issues of social change, demography, social movements, and conflicts and trends within education, religion, family, political, and economic structures.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 205 - Sociology of Family Dynamics (3)

Develops an understanding of marriage, family and kinship. Examines the family as an institution and how social, cultural and personal factors influence family relations. The stability and diversity of the family will be explored, along with current trends and some alternative life styles.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 207 - Environmental Sociology (3)

Examines humans and the environment from an ecological perspective. Focuses on industrial and economic growth versus sustainability, natural resources development and management, environmental values and social movements, and comparative perspectives on people's relationship to the environment. Review of the "Green" movement and other environmental movements and their impacts upon social dynamics, the environment, and the evolution of social movements.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 208 - Restorative Justice I (3)

Provides an introduction to the principles and practices of Restorative Justice, an important approach to harm, crime and community. Examines the history and theory behind this paradigm, comparing and contrasting restorative and retributive approaches. Looks at applications in a number of settings, including schools and the criminal justice system. National and international examples will be discussed.

Contact Hours: 45 Contact Hours.

SOC 210 - Technology and Society (3)

This course analyzes the relationship between technology and human society and culture; how technology has influenced the development of society and how social and cultural forces have influenced the development of technology. The course will examine both current and historical examples of key technologies and the ways their development and utilization have been contextualized by society and culture. In particular, the course will explore the implications of living in a modern society defined by increasing dependence on complex technologies and rapid technological change.

Contact Hours: 45 Contact Hours.

SOC 212 - Research in Social Sciences (3)

Introduces social research methods with an emphasis on the scientific method and the role of empirical inquiry into sociology. This course will include the study of methodologies of data collection and analysis, the logic of research, the role of theory, measurement, sampling and research designs. Field research and the professional norms and ethics of social research will also be covered.

Contact Hours: 45 Contact Hours.

SOC 215 - Contemporary Social Problems (3)

Explores current social issues that result in societal problems. Focuses on such issues as civil liberties, gender, religious and ethnic discrimination, substance abuse, crime, poverty, and social change.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 216 - Sociology of Gender (3)

Explores the theoretical and factual background necessary to understand the phenomenon of gender stratification in American and other cultures. Students will be exposed to a history of gender stratification in human societies, theoretical explanations for this and insights into the consequences of gender differentiation in our world today.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 218 - Sociology of Diversity (3)

Explores the variety of intergroup relations regarding race, nationality, ethnicity, gender, sexual orientation, and other diversity issues. Patterns of prejudice, discrimination and possible solutions to these issues will be addressed.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 220 - Sociology of Religion (3)

Provides an introduction to the sociology of religion, including a comparative and critical examination of world religions, by focusing on sociological interpretation and explanation of the

role of religion in human culture. The interaction between society and religion is thus examined as are a wide variety of religious beliefs and practices.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 231 - Sociology of Deviant Behavior (3)

Examines the nature, identification and explanation of deviant categories. Theories and philosophies as well as methods of treatment related to deviancy will be considered. The course will study society's attempts to control, change and institutionalize those acts, individuals or groups that a population may deem unacceptable.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 237 - Sociology of Death and Dying (3)

Provides an opportunity to familiarize students and professionals with the needs and issues surrounding dying and death. This course will provide sociological, psychological, religious, historical and anthropological perspectives for interpreting contemporary American customs dealing with dying, death and bereavement. Examines the professions associated with death and dying, such as hospice, funeral and crematory institutions, and medical care.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

SOC 240 - Cults, Extremist & Religious Movements (3)

Provides familiarization with sociological issues surrounding cults, extremist groups and new religious movements including theory and dynamics of cults, gangs and hate groups. Emphasis is on the destructive elements of this collective behavior. This course provides sociological perspectives for interpreting American laws, norms and values while examining extremist groups. This includes the study of in-group behavior, social cohesion, emergence of generalized beliefs, and both narrative and value-oriented movements.

Contact Hours: 45 Contact Hours.

Recommended Preparation: CCR 092 (p. 150), CCR 093 (p. 150) or CCR 094 (p. 150) or equivalent testing scores. These courses may be taken concurrently.

SOC 265 - Violence and Culture (3)

Examines the concepts, relationships, organizations, and research as they relate to violence in multiple cultural settings. SOC 265 assists in developing an understanding of societal and institutional causes of violence; explores resources for intervention and treatment; and provides service learning applications in violence assessment, treatment, and victim assistance.

Contact Hours: 45 Contact Hours.

SPA - Spanish

SPA 101 - Conversational Spanish I (3)

Offers beginning students the skills necessary to understand and speak Spanish. The material includes basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

Contact Hours: 45 Contact Hours.

SPA 102 - Conversational Spanish II (3)

Offers students the skills necessary to understand and speak Spanish. The material continues to cover basic conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: SPA 101 or equivalent.

SPA 111 - Spanish Language I (5)

Develops students' interpretive, interpersonal, and presentational communicative abilities in the language. Integrates these skills in the cultural contexts in which the language is used. Offers a foundation in the analysis of culture.

Contact Hours: 75 Contact Hours.

SPA 112 - Spanish Language II (5)

Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.

Contact Hours: 75 Contact Hours.

Recommended Preparation: SPA 111 or equivalent.

SPA 114 - Fast-Track Spanish I and II (5)

Designed to bridge beginning SPA courses with intermediate SPA courses. It is designed for students who have studied two years of the target language in high school and possess linguistic and cultural knowledge that true beginners do not, but are not ready yet to move to the intermediate level because they need an in-depth review of essential structures.

Contact Hours: 75 Contact Hours.

Recommended Preparation: SPA 111 or equivalent.

SPA 115 - Spanish for the Professional I (3)

Designed as an introduction to a working knowledge of the target language, cultural behaviors and values useful in various professional fields such as health care, law enforcement, bilingual education, business and others.

Contact Hours: 45 Contact Hours.

SPA 194 - Service Learning (1-12)

Allows the student to provide a service to the community utilizing knowledge and skills acquired from a course in which the student is currently enrolled or has previously taken at the student's respective college.

Contact Hours: 45 Contact Hours PER CREDIT.

SPA 201 - Conversational Spanish III (3)

Provides students with the skills necessary to continue their study of understanding and speaking Spanish. The material includes intermediate level vocabulary, grammar, and expressions.

Contact Hours: 45 Contact Hours.

Recommended Preparation: SPA 102 or equivalent.

SPA 202 - Conversational Spanish IV (3)

Provides students the skills necessary to continue their study of understanding and speaking Spanish. The material will continue to cover intermediate level conversational patterns, expressions, and grammar.

Contact Hours: 45 Contact Hours.

Recommended Preparation: SPA 201 or equivalent.

SPA 211 - Spanish Language III (3)

Continues Spanish Language I and II in the development of increased functional proficiency in listening, speaking, reading, and writing the Spanish language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This course is one of the Statewide Guaranteed Transfer courses. GT-AH4

Prerequisite: SPA 112 or SPA 114. Students will also need CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

SPA 212 - Spanish Language IV (3)

Continues Spanish Language I, II and III in the development of increased functional proficiency in listening, speaking, reading, and writing the Spanish language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This course is one of the Statewide Guaranteed Transfer courses. GT-AH4

Prerequisite: SPA 211. Students will also need CCR 092, 093, or 094 or equivalent testing scores. These courses may be taken concurrently.

Offered: *(GT-AH4).

Contact Hours: 45 Contact Hours.

SPA 215 - Spanish for the Professional II (3)

Continues SPA 115 in the development of a working knowledge of the target language, cultural behaviors and values useful in various professional fields such as health care, law enforcement, bilingual education, business and others.

Contact Hours: 45 Contact Hours.

Recommended Preparation: SPA 115 or equivalent.

SPA 235 - Spanish Reading/Writing (3)

Builds vocabulary and develops reading and writing strategies in Spanish to be able to analyze fictional and non-fictional texts and gain further cultural insight of the Hispanic world.

Contact Hours: 45 Contact Hours.

Recommended Preparation: SPA 212 or equivalent.

SPA 261 - Grammar for Heritage Language Speaker (3)

Provides formal grammatical instruction to Foreign Language students whether native or bilingual who want to develop their existing proficiency in the target language.

Contact Hours: 45 Contact Hours.

Recommended Preparation: SPA 212 or equivalent.

SPA 262 - Composition for the Heritage Language Speaker (3)

Provides formal composing instruction to Spanish Language students whether native or bilingual who want to develop their existing proficiency in the target language.

Contact Hours: 45 Contact Hours.

Recommended Preparation: SPA 212 or equivalent.

SVT - Sport Vehicle Technology

SVT 160 - Basic Motorcycle Repair I (1)

Designed to expose current and prospective entry-level motorcycle technicians to basic motorcycle maintenance and repair. Focus will be placed on routine and preventative maintenance. Topics covered in the class include basic safety, hand tool and shop procedure. One objective is to make the learner more familiar with mechanical concepts and more confident in their own ability. Course study may be tailored for each student's specific area of need or interest.

Contact Hours: 22.5 Contact Hours.

Recommended preparation: minimum assessment scores to enroll in ENG 131 (p. 171) and MAT 107 (p. 204). Possible high course fees.

SVT 165 - Basic Motorcycle Repair II (1)

Designed to build upon concepts and practices learned in SVT 160. Focus will be placed on routine and preventative maintenance. Topics covered will include study of motorcycle frame, suspension, tire and wheels. One objective is to make the learner more familiar with mechanical concepts and more confident in their own ability. Course study may be tailored for each student's specific area of need or interest.

Prerequisite: Completion of SVT 160.

Contact Hours: 22.5 Contact Hours.

Possible high course fees.

SVT 170 - Basic Motorcycle Repair III (1)

Designed to build upon concepts and practices learned in previous classes. Focus will be placed on routine and preventative maintenance. Topics covered will include study of motorcycle brakes and steering systems. One objective is to make the learner more familiar with mechanical concepts and more confident in their own ability. Course study may be tailored for each student's specific area of need or interest.

Prerequisite: Completion of SVT 165.

Contact Hours: 22.5 Contact Hours.

Possible high course fees.

TEL-Teaching-English-as-a-Second-Language- TESL

TEL 100 - TESL (Teaching English as a Second Language) English Study (3)

Provides an overview of the English language for the purpose of teaching English to speakers of other languages. It includes descriptive and contrastive analyses of English phonology, morphology, syntax, semantics and discourse.

Contact Hours: 45 Contact Hours.

TEL 102 - Procedures and Techniques for the English as a Second Language Classroom (3)

Focuses on the teaching of English grammar, speaking and listening, and reading and writing in the English as a Second Language (ESL) classroom. Instruction includes writing lesson plans, selecting and adapting instructional resources and technology, developing classroom management skills, and integrating cultural awareness. TESL students have the opportunity to observe various working models.

Contact Hours: 45 Contact Hours.

TEL 103 - Career Strategies for the TESL Workplace (1)

Presents professional English as a Second Language (ESL) representatives from various area domains such as community college, teaching TESL abroad, community-based ESL adult schools, K-12 options, entrepreneurial use in workplace literacy, virtual ESL possibilities, private ESL institutions, and business technical areas for ESL abroad and locally. It provides interaction with professional teachers working in the field. An additional workshop will help students develop TESL job search skills and resume writing.

Contact Hours: 15 Contact Hours.

TEL 188 - TESL Teaching Practicum (2)

Provides a supervised student teaching practicum in an ESL school, class or community agency. Students will work with an ESL mentor for planning and delivering lessons to a group of ESL students.

Contact Hours: 60 Contact Hours.

Recommended Preparation: TEL 100 (p. 232) and TEL 102 (p. 232). These courses may be taken concurrently.

TEL 225 - Second Language Acquisition (3)

Examines the intricate web of variables that interact in the second language learning process. The emphasis in the course will be on examining each of these variables and then attempting to understand how they work together to foster or inhibit successful second language learning and acquisition.

Contact Hours: 45 Contact Hours.

See the list of Specialized Courses on the first page of this Course Offerings section.

TEL 245 - ESL in the Content Areas (3)

Prepares teachers who work with limited English proficient students to integrate effective instructional strategies that will assist in the development of English Language learners' (ELLs) social and academic English and support their transition to US culture and schools. This course is appropriate in a variety of program models, mainstream classrooms, self-contained ESL classrooms, and bilingual programs and may be adapted for use with pre-service teachers and para-educators.

Contact Hours: 45 Contact Hours.

THE - Theatre Arts

THE 105 - Theatre Appreciation (3)

Includes discussions, workshops, and lectures designed to discover, analyze and evaluate all aspects of the theatre

experience: scripts, acting, directing, staging, history, criticism, and theory.

Prerequisite: CCR 092, CCR 093 or CCR 094 or equivalent testing scores. These courses may be taken concurrently. Corequisite: CCR 092, CCR 093 or CCR 094 or equivalent testing scores.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

THE 106 - Cross-Cultural Storytelling (4)

Offers international and American students the opportunity to share ethnic/cultural experiences by using the theatre techniques of storytelling, improvisation, mime, verbal and non-verbal language, scripting, and staging techniques resulting in performance projects.

Contact Hours: 60 Contact Hours.

THE 108 - Theatre Script Analysis (3)

This course introduces students to methods of reading and analyzing literature for the stage. In addition, students will apply staging and design concepts in visualizing and analyzing how a play looks, sounds, and feels when produced.

Prerequisite: CCR 092, CCR 093 or CCR 094 or equivalent testing scores. These courses may be taken concurrently. Corequisite: CCR 092, CCR 093 or CCR 094 or equivalent testing scores.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

THE 111 - Acting I (3)

Covers basic acting techniques and approaches including scene study, improvisation, and script analysis. It includes practical application through classroom performance.

Contact Hours: 45 Contact Hours.

THE 112 - Acting II (3)

Continues to explore basic acting techniques and approaches including scene study, improvisation, and intermediate script analysis. It includes practical application through classroom performance.

Prerequisite: THE 111

Contact Hours: 45 Contact Hours.

THE 115 - Stage Movement for Actors (3)

Introduces the vocabulary of human movement, techniques of physical training, and anatomy and kinesiology for the actor. The course includes forms of basic dance and the coordination of movement with vocal delivery.

Contact Hours: 45 Contact Hours.

THE 116 - Technical Theatre (3)

Introduces hands-on methods of constructing and painting scenery and properties and operating stage lighting. Students also learn the proper procedures of using shop equipment and serving on stage crews.

Contact Hours: 45 Contact Hours.

THE 131 - Theatre Production I (3)

Allows students to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage-managing, and administration is available.

Contact Hours: 45 Contact Hours.

THE 132 - Theatre Production II (3)

Allows students to put into practice theories of theater production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage-managing, and administration is available.

Prerequisite: THE 131

Contact Hours: 45 Contact Hours.

THE 135 - Stage Makeup I (3)

Covers makeup design and application techniques. Techniques include basic corrective, character, old age, and fantasy application.

Contact Hours: 45 Contact Hours.

THE 136 - Stage Makeup II (3)

Continues to explore theatrical makeup design and application techniques. In addition, prosthetics, hair design and other more advanced applications will be explored.

Prerequisite: THE 135 or instructors permission.

Contact Hours: 45 Contact Hours.

THE 141 - Improvisation I (1)

Helps students learn improvisation skills for performance and character development. Emphasis is placed on "Second City" style of improvisation.

Contact Hours: 15 Contact Hours.

THE 211 - Development of Theatre: Greek-Renaissance (3)

Surveys the history and evolution of drama from ancient Greece to the Renaissance, emphasizing all aspects of the art form from period values to analysis of dramatic literature and performance.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently. Corequisite: CCR 092, CCR 093 or CCR 094 or equivalent testing scores.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

THE 212 - Development of Theatre: Restoration-Modern (3)

Surveys the history and evolution of drama from the Renaissance to the present, emphasizing all aspects of the art form from period values to the analysis of dramatic literature and performance.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently. Corequisite: CCR 092, CCR 093 or CCR 094 or equivalent testing scores.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

THE 213 - Intermediate Acting I (3)

Continues Acting Theatre 112. Emphasis is on artistic concentration of voice and movement. A detailed character biography is required.

Contact Hours: 45 Contact Hours.

THE 214 - Intermediate Acting II (3)

Emphasizes artistic concentration of voice and movement. Detailed character biography is required. This course is a continuation of THE 213.

Contact Hours: 45 Contact Hours.

Recommended Preparation: THE 213

THE 215 - Playwriting (3)

Gives students the opportunity to learn and practice playwriting techniques, thereby improving creative writing skills. Elements of dramatic structure, dialogue, styles and theatrical practices are emphasized.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently. Corequisite: CCR 092, CCR 093 or CCR 094 or equivalent testing scores.

Offered: *(GT-AH1).

Contact Hours: 45 Contact Hours.

THE 218 - Readers' Theatre (3)

Studies ensemble interpretation of literature, poetry, prose, and drama, primarily through the medium of the spoken word.

Contact Hours: 45 Contact Hours.

THE 231 - Theatre Production III (3)

Allows students to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

Contact Hours: 45 Contact Hours.

THE 232 - Theatre Production IV (3)

Allows students to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

Contact Hours: 45 Contact Hours.

THE 237 - History of Costumes and Fashion (3)

Provides an examination of the clothing and accessories used by humans around the world from Prehistoric to Modern times.

Contact Hours: 45 Contact Hours.

THE 240 - Theatre Voice and Diction (3)

Provides students with individual tutorials which define, design and apply specific vocal techniques to abate singing and speech difficulties. Master class performances provide the opportunity to conjure the energy, charisma and stage command necessary for presentations.

Contact Hours: 45 Contact Hours.

THE 245 - Basic Costume Design and Construction (3)

Explores the basics of costume design and color theory. Construction techniques using regular and industrial sewing machines will be applied in constructing costumes and accessories. Students will be introduced to pattern drafting.

Contact Hours: 45 Contact Hours.

THE 255 - Intermediate Playwriting (3)

This course continues to explore playwriting techniques developed in THE 215 for theatre and applies concepts of writing for Description: movie, television, radio, and animation scripts, with emphasis on the dramatic process and form.

Contact Hours: 45 Contact Hours.

THE 283 - Internship: Summer Stock Theatre (1-3)

Allows students to participate in summer play production that often includes outdoor performances and touring opportunities. Plays by classic authors, such as Shakespeare and Moliere, are frequently performed. Participation in all aspects of theatre production is available.

Contact Hours: 15 Contact Hours PER CREDIT.

See the list of Specialized Theatre Arts Courses on the first page of this Course Offerings section.

VET - Veterinary Technology

VET 102 - Veterinary Medical Terminology (1)

Introduces the student to the structure of veterinary medical terms with emphasis on using and combining the most common prefixes, roots and suffixes. Includes terms related to major body systems, oncology, psychiatry, as well as clinical laboratory and diagnostic procedures and imaging. Class structure provides accepted pronunciation of terms and relative use in the veterinary specific setting.

Contact Hours: 15 Contact Hours.

VET 103 - Veterinary Assistant Restraint and Handling (2)

Designed to give students knowledge and skills required to handle and restrain small and large animal species common to the veterinary assistant in practice. Provides experience in several common clinical procedures including muzzling, haltering, nail trimming, bathing and vaccine preparation.

Prerequisite: Admission to the VET Tech Assistant program.

Contact Hours: 45 Contact Hours.

VET 106 - Exotic Animal Handling (2)

Designed to provide students knowledge and skills required for veterinary technicians. This course focuses on exotic and laboratory animal husbandry, handling, restraint, and specific problems encountered with exotic and laboratory animals.

Prerequisite: Admission to the VET program. NOTE: Handling of animals will include exotic pets and laboratory animals.

Contact Hours: 45 Contact Hours.

VET 108 - Introduction to Laboratory Procedures (3)

Studies the biology, clinical appearance and laboratory diagnosis of parasitic diseases of veterinary and zoonotic importance.

Prerequisite: Admission to the VET program and BIO 111.

Contact Hours: 60 Contact Hours.

VET 109 - Applied Companion Animal Behavior (3)

Explores the topic of companion animal behavior through: critical reviews of behavioral literature and its implications for applied techniques in behavior, demonstrations of applied techniques for modifying animal behavior and the application of the principles of companion animal body posture and communication to everyday treatment of animals. Focuses on treatment of animals in veterinary practice, including improving handling techniques and safety.

Contact Hours: 45 Contact Hours.

Admission to the veterinary technician or veterinary assistant program, graduate of the programs or credentialed veterinary technician.

Recommended Preparation: BIO 111 (p. 145).

VET 113 - Veterinary Assistant Surgical Nursing and Care (3)

Introduces surgical assisting of the veterinarian and/or the veterinary technician, including basic knowledge of surgical instruments and surgery room hygiene. Also introduces basic nursing care of animal patients including safety concerns and nursing procedures.

Prerequisite: Admission to the VET Tech Assistant program.

Contact Hours: 60 Contact Hours.

VET 114 - Veterinary Assistant Laboratory and Clinical Procedures (3)

Covers selected areas of common laboratory and diagnostic imaging procedures performed in a veterinary hospital. Emphasis is on assisting the veterinarian and/or veterinary technician with these procedures.

Prerequisite: Admission to the VET Tech Assistant program.

Contact Hours: 60 Contact Hours.

VET 115 - Surgical Nursing (2)

Constructed for the student with limited background in veterinary medicine. The course expresses the need for familiarity with instruments, surgical support equipment, and proficiency in the proper preparation of the operating room.

Prerequisite: VET 205 and VET 206 Corequisite: VET 206

Contact Hours: 45 Contact Hours.

VET 116 - Humane Treatment and Handling of Animals (3)

Designed to give students knowledge and skills required for veterinary technicians. The course focuses on animal welfare and humane treatment during handling and restraint, behavior, safety, equipment choice, and typical clinical procedures.

Prerequisite: Admission to VET Program. NOTE: Handling of animals will include domestic small and large species.

Contact Hours: 75 Contact Hours.

VET 120 - Office Procedures and Relations (2)

Presents commonly encountered clinical procedures with the emphasis on the role of the veterinary technician in the management of veterinary patients and records. The course also includes introduction to veterinary management software and on-line veterinary services.

Prerequisite: Admission to VET or VET assistant program

Contact Hours: 45 Contact Hours.

VET 134 - Diagnostic Imaging (2)

Covers selected areas of diagnostic imaging with an emphasis on radiology. Topics will include radiation properties, x-ray production, radiographic equipment, darkroom procedures, the radiographic image, animal positioning and radiation safety. An introduction to special imaging techniques such as computed tomography (CT scan) and ultrasound will also be included.

Prerequisite: MAT 107 or MAT 103 or MAT 121 and VET 205.

Contact Hours: 45 Contact Hours.

VET 180 - Internship: Private Practice (3)

Participate in a 135 hour externship experience in a private practice. The student is involved in the day-to-day work of the practice including restraint and handling of animals, office

procedures, clinical laboratory techniques, radiology, pharmacy and surgery preparation.

Prerequisite: VET 108, VET 115, VET 116, VET 120, VET 134, VET 224 and VET 241.

Contact Hours: 135 Contact Hours.

VET 181 - Internship: Laboratory Animal Technology (2)

Provides externship experience through Laboratory Animal Resources at Colorado State University. The course introduces career opportunities in a laboratory animal setting

Prerequisite: VET 116

Contact Hours: 90 Contact Hours.

VET 183 - Internship (2)

Veterinary Assistant students participate in a 72 hour internship in a private practice. This provides students with practical day to day experience in handling and restraint of animals, assisting with office procedures, clinical laboratory techniques, and surgical preparation.

Prerequisite: Completion of VET 120, VET 103, VET 113, VET 114.

Contact Hours: 72 Contact Hours.

VET 205 - Veterinary Anatomy and Physiology I (4)

Provides background in the anatomy and physiology of animals. The class covers the structure and function of each body system, including skeletal, muscular, circulatory, integumentary, and respiratory. Other subjects include principles of metabolism and unique characteristics of common domestic species. Applied laboratory experiences are included.

Prerequisite: Admission to the VET program and BIO 111.

Contact Hours: 75 Contact Hours.

VET 206 - Veterinary Anatomy and Physiology II (4)

Provides additional detail in anatomy and physiology of companion and farm animal species. The class covers interrelationships between body systems, such as respiratory, cardiovascular, urogenital, and reproductive. Additional topics include metabolism and digestion, acid/base balance, neurology, and reproductive endocrinology. Applied laboratory experiences are included as well as clinical applications of anatomy.

Prerequisite: VET 205

Contact Hours: 75 Contact Hours.

VET 224 - Pharmacology for Veterinary Technicians (3)

Provides background in pharmacology principles including topics such as: mechanism of drug action, types of drugs, anesthetic agents, pharmacy management and calculations related to drug dosages.

Prerequisite: MAT 103 or MAT 107 or MAT 121 and VET 205 or VET 206 Corequisite: VET 206

Contact Hours: 60 Contact Hours.

VET 225 - Anesthesiology (3)

Covers appropriate forms of injectable and gaseous anesthesia for surgical and diagnostic procedures. Other topics include anesthetic monitoring, emergency procedures, and pain management.

Prerequisite: VET 206 and VET 224.

Contact Hours: 60 Contact Hours.

VET 227 - Animal Nutrition (2)

Gives students a foundation in the principles of animal nutrition. The course focuses on the basic elements of nutrition including the major categories of nutrients, and their sources, digestion, and metabolism. Both large and small animal feeds and feeding will be covered. The course emphasizes the relationship between nutrition and health.

Prerequisite: VET 206

Contact Hours: 45 Contact Hours.

VET 240 - Veterinary Medicine and Surgery (4)

Presents commonly encountered medical and surgical conditions of animals with the emphasis on the role of the veterinary technician in the management of these conditions. This course includes hands-on labs in catheterization, bone marrow aspirates, centesis and others.

Prerequisite: VET 116

Contact Hours: 75 Contact Hours.

VET 241 - Clinical Laboratory Procedures (4)

Discusses the biochemical derangements that characterize disease. Topics include proper collection and analysis of urine, blood, and cytological samples; basic principles of anatomic pathology; necropsy procedure and sample collection.

Prerequisite: VET 108 and VET 205.

Contact Hours: 90 Contact Hours.

VET 242 - Veterinary Critical Care (2)

Provides instruction in appropriate nursing assessment, monitoring and intervention with emergencies. Uses knowledge and understanding of overall anatomy, physiology, and disease or accident process to assist in veterinarian's diagnoses and treatment.

Prerequisite: Admission to the VET program or Certification as a Veterinary Technician.

Contact Hours: 30 Contact Hours.

VET 243 - Veterinary Diagnostic Microbiology (3)

Includes the biology, clinical appearance and laboratory diagnosis of bacterial and viral diseases of veterinary and zoonotic importance.

Prerequisite: Admission to the VET program and BIO 111. NOTE: Laboratories will include microscope analysis of samples.

Contact Hours: 60 Contact Hours.

VET 250 - Clinical Competency Evaluation (1)

Evaluates the students' clinical skills and knowledge after successful completion of the internship courses, in order to prepare them for the national board examination and clinical practice. Evaluation of clinical skills and knowledge includes selected clinical laboratory techniques (parasitology, hematology, urinalysis, cytology, chemistry, serology, microbiology); diagnostic imaging; office procedures; surgical preparation, instrumentation and assistance; anesthesia induction, maintenance and monitoring; restraint and handling techniques; small, large and laboratory animal diagnostic and therapeutic techniques; and pharmacology calculations, labeling and drug classification.

Prerequisite: VET 180

Contact Hours: 23 Contact Hours.

See the list of Specialized Courses on the first page of this Course Offerings section.

VET 280 - Internship (11)

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 business location and with the direct guidance of the instructor/ coordinator.

WEL - Welding Technology

WEL 100 - Safety for Welders (1)

Covers the hazards of welding on health and safety, locating essential safety information from a code or other standard, and identifying and applying shop safety procedures.

Contact Hours: 22.5 Contact Hours.

WEL 101 - Allied Cutting Processes (4)

Covers setting up equipment and performing cutting and gouging operations utilizing the oxyacetylene, air carbon arc, exothermic, and plasma arc cutting processes. This course will also provide an introduction to blueprint reading.

Prerequisite: WEL 100 Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 103 - Basic Shielded Metal Arc I (4)

Covers performing safety inspections, making minor repairs, adjusting operating parameters, and operating SMAW equipment utilizing E-6010, E-6013, and E-7018 electrodes. Layout procedures and practices will also be introduced.

Prerequisite: WEL 100 Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 104 - Basic Shielded Metal Arc II (4)

Covers performing safety inspections, making minor repairs, adjusting operating parameters, and operating SMAW equipment utilizing E-7018 and E-6010 electrodes. Layout procedures will be practiced during this course.

Prerequisite: WEL 100 and WEL 103. Corequisite: WEL 100 and WEL 103.

Contact Hours: 90 Contact Hours.

WEL 106 - Blueprint Reading for Welders and Fitters (4)

Covers interpreting weld symbols on blueprints, identifying proper layout methods and tools, and proper joint design necessary for various welding processes.

Contact Hours: 60 Contact Hours.

WEL 110 - Advanced Shielded Metal Arc I (4)

Covers performing safety inspections, minor repairs, operating parameters, operation of SMAW equipment, and SMAW operations on groove and fillet welds utilizing E-6010 and E-7018 electrodes. Layout procedures will be practiced during this course.

Prerequisite: WEL 100 and WEL 104. Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 124 - Introduction to Gas Tungsten Arc Welding (4)

Covers welding in all positions and on various joint configurations using the Gas Tungsten Arc Welding (Tungsten Inert Gas) welding process on carbon steel, stainless steel and aluminum. Student should be familiar with basic metallurgy pertaining to the weldability of metals, structural joints, and safety in the welding industry.

Prerequisite: WEL 100 Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 125 - Introduction to Gas Metal Arc Welding (4)

Covers welding in all positions and on various joint configurations using the Gas Metal Arc Welding (Metal Inert Gas) welding process and flux core welding on carbon steel, stainless steel and aluminum. Student should be familiar with basic metallurgy pertaining to the weld ability of metals, structural joints, and safety in the welding industry.

Prerequisite: WEL 100 Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 224 - Advanced Gas Tungsten Arc Welding (4)

Covers welding in all positions on carbon steel, stainless steel and aluminum plate and carbon steel pipe with the GTAW process and welding 3G and 4G vee groove plates. Student should be familiar with basic metallurgy pertaining to the weld ability of metals, structural joints, and safety in the welding industry.

Prerequisite: WEL 124 Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 225 - Advanced Gas Metal Arc Welding (4)

Covers welding in all positions on carbon steel plate with the Gas Metal Arc Welding process. Student should be familiar with basic metallurgy pertaining to the weld ability of metals, structural joints, and safety in the welding industry.

Contact Hours: 90 Contact Hours.

WEL 230 - Pipe Welding I (4)

Covers safety inspections, minor repairs, operating parameters, and operation of Shielded Metal Arc Welding, Gas Metal Arc Welding, and Flux Cored Arc Welding equipment in a variety of positions on plain carbon steel pipe joints. Also covers evaluating and solving complex welding and fabrication problems and administering hands-on training and supervision to other students during assigned fabrication and welding operations.

Prerequisite: WEL 110 and WEL 225. Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 231 - Pipe Welding II (4)

Covers safety inspections, minor repairs, operating parameters, and operation of Shielded Metal Arc Welding, Gas Metal Arc Welding, and Flux Cored Arc Welding equipment in a variety of positions on plain carbon steel pipe joints. Also covers evaluating and solving complex welding and fabrication problems and administering hands-on training and supervision to other students during assigned fabrication and welding operations.

Prerequisite: WEL 230 Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 240 - Pipe Welding Certification (4)

Introduces theory and practice in modern welding methods of pressure pipeline and pipe systems. Emphasis toward welder qualification under various codes.

Prerequisite: WEL 231 and WEL 100. Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 250 - Layout and Fabrication (4)

Develops welding and associated skills in the use of drawings and blueprints in planning. Includes designing and layout of projects.

Prerequisite: WEL 100 Corequisite: WEL 100

Contact Hours: 90 Contact Hours.

WEL 264 - Creative Welding (4)

Introduces design and construction of welded sculptures with the use of different fabrication techniques. This course includes uses of different metalworking machines, hot and cold working practices, and demonstration of coloring and texturing metal.

Contact Hours: 90 Contact Hours.

WEL 275 - Special Topics: Sculptural Welding (3)

Introduces Welding Brazing and Cutting steel with the use of Welding applications and processes. This course provides the student with the skills to create sculptural welded art.

Prerequisite: WEL 100, WEL 125, WEL 225, and MAT 107.

Contact Hours: 90 Contact Hours.

WEL 289 - Capstone (1)

Focuses on demonstrated culmination of learning within a given program of study.

WST Women's Studies**WST 200 - Introduction to Women's Studies (3)**

Examines the nature and function of women in society from an interdisciplinary perspective, focusing on the similarity and diversity of women's experience over time and across cultures. The course will examine topics such as sex role, socialization, political, and philosophical perspectives on women's issues, and women's accomplishments in history, art, literature, science, health issues and the family. Students will gain an awareness of the limitations of traditional scholarship on women, and gain a means of practical application of the new scholarship on women's roles and nature.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

WST 225 - Women and Social Change (3)

Enables students to gain an understanding of the role of the systems of oppression in society and avenues available to them to create both individual and collective change through social action. Each student becomes aware of their ability to enact change and the empowerment that process provides. We will explore issues of diversity including, but not limited to, race, class, gender, age and disability. The course emphasizes critical thinking skills and is informed by feminist pedagogy.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

WST 240 - Goddesses and Women in the Ancient World (3)

Surveys gender socialization and the roles, challenges, contributions, and images of women in the development of cultures. Through a study of arts, literature, music, politics, religion, philosophy, laws, and social standards, students are introduced to the history of ideas that have defined women's place in societies. It examines goddesses, rituals, and ceremonies and how the image of the Feminine Divine changed from matriarchal cultures through the establishment of patriarchal cultures. These topics will be viewed through diverse cultures, including European and non-European, from the Ancient World through the Middle Ages.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

WST 249 - Women's Sexuality (3)

Explores how different cultures have understood women's sexuality and the power of femininity. The course addresses theories of sexuality and erotic power, women's sexualities across cultures and throughout the lifespan, the perception of sexuality in religion and history, and creative visualizations of women's sexuality in literature, visual, musical and performance art.

Prerequisite: CCR 092, CCR 093, or CCR 094 or equivalent testing scores. These courses may be taken concurrently

Offered: *(GT-SS3).

Contact Hours: 45 Contact Hours.

COURSE CHANGES

Courses Added

ANT	108	Arch.of World Rock Art:SS3	3
ART	230	Color Theory	3
ART	257	Advanced Portraiture	3
BUS	201	Bus Logistics Optimization	3
BUS	202	Purchase and Supply Logistics	3
BUS	218	Legal Environment/Business II	3
CAD	221	Adv 3Ds Max Arch Visualization	3
CIS	202	Automat Prjt Man: MS Project	3
CNG	129	Wireless LAN Fundamentals	3
CNG	142	Intro to Cloud Computing	3
CNG	165	Convergent Technologies	3
CNG	201	Linux Configuration: (OS)	3
CNG	202	Unix/Linux Server Admin	3
CNG	203	Adv Linux Server Admin	3
CNG	243	Cloud Security and Cyber Law	3
CSC	246	Mobile App Development :()	3
CUA	125	Introduction to Foods	4
CUA	129	Center of the Plate	4
CUA	145	Introduction to Baking	4
CUA	210	Adv Cuisine & Garde Manger	4
CUA	261	Cost Controls	3
CUA	262	Purchasing/Hospitality Indust	3
CWB	204	Web Presentation: (Software)	3
ECO	105	Introduction to Economics	3
ENY	161	Energy Industry Fundamentals	4
FER	101	Craft Beer Brewing	4
GEO	160	Global Climate Change	3
GIS	220	GIS for Business	3
HIS	265	Writing About History: CO3	3
HIS	205	Women in World History	3
HIS	203	Civil War Era Amer Hist:GT-HI1	3
HIS	259	Modern Middle East:HI1	3
HIT	122	Workflow Fund of Healthcare	3
HOS	210	Event Finances	3
HOS	215	Training & Development	3
HWE	237	Exercise, Nutrition & Body Comp	3
MAN	243	Project Management in Action	3

MAN	103	Managing Change	1
MGD	268	Business for Creatives	3
MGD	244	Integrated Multimedia Dev	3
MGD	245	Integrated Multimedia Dev 2	3
MTE	135	Lean Six Sigma	4
MUS	168	Audio Post Production I	3
MUS	265	Live Audio Engineering	3
NUR	154	PN Licensing Exam Preparation	1.5
NUR	254	RN Licensing Exam Preparation	1.5
OUT	100	Non-Tech Mountaineering	1
OUT	108	Wilderness Survival Skills	3
PHT	235	Pharm Calcs/Compounding Techs	4
VET	102	Veterinary Medical Terminology	1

Courses Deleted

ENG	030	Basic Writing Skills	2
ENG	060	Writing Fundamentals	3
ENG	090	Basic Composition	3
HHP	145	Digestive Wellness	1
HHP	153	Acupressure Tap Techniques I	1
HHP	154	Acupressure Tap Techniques II	1
HHP	164	Intro to Hand Reflexology	1
HHP	169	Intro to Healing Hands and Feet	1
HHP	244	Holistic Health Level I	1
HHP	254	Holistic Health Level II	1
HHP	256	Holistic Health Level III	1
HHP	262	Psychoneuroimmunology	2
HLT	203	Plant Disease and Pesticides	2
HLT	216	Garden Center Mgmt.	2
HLT	235	Principles of Grading /Drng	3
HLT	243	Golf Turf Management	3
HLT	244	Sports Turf Management	3
HLT	245	Green Industry Business Ops	3
HLT	246	Golf & Sports Turf Mgmt	2
HLT	247	Irrigation Instalation	4
HLT	249	Irrigation Troubleshooting	2
HLT	255	Drip Irrigation	2
HLT	256	Golf And Comm. Irrigation	2
MAT	030	Fundamentals of Math	2

MAT	045	Compress Pte Algebra	4
MAT	060	Pre-Algebra	3
MAT	090	Introductory Algebra	4
MST	110	Ethics for Massage Therapy	1
MUS	166	MIDI II	2
PHT	206	Employment Preparation	.5
REA	030	Basic Reading Skills	2
REA	060	Foundations of Reading	3
REA	090	College Prep Reading	3

FACULTY AND STAFF

No institution could gain a reputation for excellence without the hard work of many dedicated people striving to fulfill that institution's mission.

In this section we list many of the people responsible for Front Range Community College's reputation for excellence.

We are grateful for the guidance of the State Board for Colorado Community Colleges and Occupational Education and our Area Advisory Council.

We also want to recognize the dedication of our faculty and our administrative and classified staff. Because of space considerations we are able to list only administrators and permanent faculty here, but the task we have set for ourselves — ensuring your success as a student at Front Range Community College — is one that involves every employee.

State Board for Colorado Community Colleges and Occupational Education

Appointed Members:

Mr. Rich Martinez, Chair

6th Congressional District (U)

Dr. Russ Meyer, Vice Chair

4th Congressional District (D)

Ms. Maury Dobbie,

2nd Congressional District (R)

Mr. Jim Johnson

5th Congressional District (R)

Dr. Byron McClenney

2nd Congressional District (D)

Ms. Theresa Pena

At-Large (D)

Dr. John Trefny

7th Congressional District (U)

Mr. Ken Weil

1st Congressional District (D)

Ms. Jean White

3rd Congressional District (R)

Non-Voting Members:

Mr. Robert Henderson

SFAC Representative

Mr. Ed Miller

SSAC Representative

Administration

ARROYO, Patricia, Director, Budgets and Business Services & Continuous Process Improvement (College Wide). M.B.A., Northwestern University, 1998; B.S., University of Illinois, 1991

BINARD, Kristina, Associate Vice President, Enrollment Management and Student Success (College Wide). Ph.D., University of Colorado, Denver, 2007; M.S., Colorado State University, 1994; B.S., Colorado State University, 1989

BROWN, Derek, Associate Vice President, Facilities Planning and Management (College Wide). Masters, Colorado University, Denver, 1987

BROWN, Therese, Vice President, Westminster Campus. M.S., University of Nebraska, 1985; B.S., University of Nebraska, 1981

CURRAN, Linda, Vice President, Boulder County Campus. Ph.D., State University of New York at Binghamton, 1990; M.B.A., State University of New York at Binghamton, 1984; B.A., State University of New York at Binghamton, 1977

DEREMER, Dennis, Director, Facilities (Larimer Campus). M.A., Western State College, 1982; B.S., University of Southern Colorado, 1977

DORSEY, Andrew, President (College Wide). M.A., Lesley College, 1993; M.B.A., Harvard Business School, 1985; B.A., Harvard College, 1981

GOLDSMITH, Carolee, Director, Financial Aid (College Wide). B.S., Fort Hays State University, 2004

GREGORY, Robert, Director, Employee Relations (College Wide). M.A., Michigan State University, 1995; B.A., Michigan State University, 1990

HARBOUK, Joseph, Vice President, Finance and Administration (College Wide). Ph.D., Loyola Marymount University, 2011; M.B.A., University of Indiana, 1996

HOGAN, Stacey, Executive Director, Strategic Planning and Resource Development (College Wide). Ph.D., Colorado State University, 2005; M.S., University of Denver, 1997

MAHARAS, Marian, Director, Marketing and Advancement (College Wide). M.A., University of Texas, 1980; B.A., Oklahoma State University, 1972

MCCOY, Ryan, Executive Director, Foundation (College Wide). M.A., University of Northern Colorado, 2006; B.A., University of Northern Colorado, 2004

MEESE, Paul, Executive Director, Organizational Development & Human Resources (College Wide). M.A., Michigan State University, 1984

MENEFEE, Jeannine, Director, Information Technology (College Wide). M.B.A., University of Colorado, 1999; M.S., University of Colorado, 1997; B.F.A., University of Iowa, 1972

O'NEILL, Patrick, Director, Facilities (Westminster Campus). M.A., Wayne State University, 1996; B.A., Wayne State University, 1989

VELTRI, Sandra, Vice President, Academic/Student Services (College Wide). Ph.D., Colorado State University, 2003

VOSLER, Lynn, Director, Workforce Development (College Wide). B.S., University of Wyoming, 1977

WALLACE, Kim, Director, Institutional Research (College Wide). M.A., University of New Mexico, 1995; B.A., University of New Mexico, 1993

WALTHERS, Bruce, Vice President, Larimer Campus. M.A., Bowling Green State University, 1978; B.A., Colorado State University, 1977

Instruction and Student Services

CALVERT, Linda, Dean of Instruction (Westminster Campus). B.S., University of Phoenix, 2002

DALE, Kimberly, Dean of Instruction (Larimer Campus). Ph.D., Colorado State University, 2012; M.S., University of Colorado, 1998; B.S., Metropolitan State College of Denver, 1988

GEARY, Mary, Dean of Instruction (Boulder County Campus). M.A., George Mason University, 1997; B.A., George Mason University, 1994

HARRINGTON, David, Dean of Instruction (Boulder County Campus). Ph.D., Pennsylvania State University, 1993; M.A., Seattle University, 1985; B.A., Western Washington University, 1983

JAMISON, Matthew, Dean of Instruction (Boulder County Campus). M.A., Mankato State University, 1991; B.S., Cornell College, 1989

MILLER, Laurie, Dean of Instruction (Westminster Campus). M.A., Lesley University, 1995; B.S., Miami University, 1979

PELLISH, Catherine, Dean of Instruction (Westminster Campus). M.S., University of Colorado, 1997; B.S., Marquette University, 1985

PRESTWICH, Aaron, Dean of Student Services (Westminster Campus). M.A., University of Northern Colorado, 2007; B.S., University of Northern Colorado, 2005

RAMIREZ, Monica, Dean of Instruction (Westminster Campus). Ed D, University of Wyoming, 2007; EDS, Nova Southeastern University, 1988; M.S., Ludwig-Maximilians-Universitaet, Munchen, Germany; B.A., Ludwig-Maximilians-Universitaet, Munchen, Germany

SCHWARTZ, Jana, Dean of Student Services (Larimer Campus). Ph.D., University of Northern Colorado, 2009

SMITH, Lauren, Dean of Instruction (Larimer Campus). M.A., Regis University, 2008; B.S., University of Wisconsin Superior, 1988

STEIN, Carla, Dean of Student Services (Boulder County Campus). M.A., University of Denver, 1984; B.A., College of Santa Fe, 1981

UNNITHAN, Shashikala, Dean of Instruction (Larimer Campus). Ph.D., University of Nebraska, 1985; M.B.A., Colorado State University, 1994; M.S., Indian Institute of Technology, New Delhi, India, 1980

VERCAUTEREN, Tammy, Dean of Online Learning (College Wide). M.A./M.B.A., University of Colorado, 2000; B.A./B.F.A., Colorado State University, 1991

Faculty

ALEJOS, Carla, Development Mathematics. M.A., University of Northern Colorado, 2004; B.A., University of Colorado, 1990

ALMEDA, Wendy, Pharmacy Technician. B.A., University of Colorado Denver, 2013

ALTMAN, Mardie, Animal Laboratory Technology. A.A.S., Front Range Community College, 1996; B.S., Colorado State University, 1975

AUGUSTINE, Thomas, Computer Information Systems. M.S., Colorado Technical University, 1997; B.S., University at St Albany, 1991

BACHELER, Daniel, Horticulture. B.S., Michigan State University, 2000

BACHMAN, Marty, Nursing. Ph.D., Colorado State University, 1998; M.S., University of Colorado, 1985; B.S., University of Northern Colorado, 1980

BAILEY, Tamara, Nursing. M.S.N., University of Colorado, 2001; AD-RN Community College of Denver, 1976

BARBER, Michael, English. MFA., Naropa University, 2004; B.A., University of Richmond, 1990

BARBUR, John, Biology. M.S., Portland State University, 1996; B.S., Portland State University, 1992; A.S., Mt. Hood Community College, 1982

BARTH, Richard, Chemistry. Ph.D., University of Arizona, 1974; M.S., Colorado State University, 1970; B.S., Michigan State University, 1966

BAUER, Elizabeth, Veterinary Technology Sciences. D.V.M., Colorado State University, 1997; M.S., University of Arizona, 1985; B.A., Colorado College, 1980

BEAL, Peter, Art History/Humanities. M.A., University of Colorado, 1998; B.A., Bowdoin College, 1987

BEARD, Jane, Nursing. B.S., Creighton University College of Nursing, 1980

BEAVEN, Herb, Welding. M.A., University of Phoenix, 2005

BECKLEY, Sheila, Culinary Arts. M.S., Colorado State University, 2009; B.S., University of Philippines, 1998

BELT, Soley, Architectural & Landscape Design. M.L.A., University of Georgia, 1999; B.S., University of Colorado, 1995

BENESH-WILLIAMS, Joyce, Manufacturing Technology

BENNANI, Farah, Biology. Ph.D., IBN TOFAIL University, 2000; B.S., University of Philippine, 1998; B.S., Mohammed University, 1995

BERMAN, Brandon, Multimedia Graphic Design. M.A., Center for Humanistic Studies, 1994; B.A., University of New Mexico, 1992

BHATTARAI, Niroj, Economics. M.A., San Diego State University, 2004; B.A., Hiram College, 2002

BLIGH, Diane, Nursing. M.S., University of Northern Colorado, 1996; B.S., Metropolitan State College of Denver, 1993; A.A.S., Front Range Community College, 1990

BLUETT, Nadine, Mathematics. M.S., Portland State University, 2001; B.A., Lewis and Clark College, 1998

BOGGS, Keith, Business. M.A., University of Denver, 1969; B.A., University of Denver, 1967

- BORG, Jeffrey**, Political Science. M.Div., University of Denver, 1996; M.Div., Pacific School of Religion, 1988; B.A., Grinnell College, 1983
- BRENKERT, Joseph**, Mathematics, B.A., University of Michigan, 1997; M. A., Portland State University, 2005
- BRINKMANN, Jennifer**, Mathematics. M.S., California State University-Long Beach, 2008; B.S., California State University-Long Beach, 2006
- BROESCHE, Tiffany**, Business. M.S., University of Missouri-Columbia, 2004; B.S., University of Missouri-Columbia 2003
- BROKAW, Lydia**, Art. M.F.A., University of South Florida, 1995; B.A., Metropolitan State College of Denver, 1981
- BROWN, Louise**, Biology. M.S., Texas Christian University, 1980; B.S., Texas Christian University, 1978
- BURKE, Tina**, Pharmacy Technician. Ph.D., University of Colorado, 2011; M.S., University of Colorado, 2009
- BURNHAM, Robert**, Computer Information Systems. M.S., New Mexico State University, 1984; B.S., Baker University, 1977
- BYER, Beverly**, Psychology. M.A., University of Colorado, 1988; B.S., Colorado State University, 1986
- CALDWELL, Andrew**, Astronomy. Ph.D., North Carolina State University, 1986
- CAMPBELL, Marissa**, English. M.F.A., Old Dominion University, 2002; B.A., Morehead State University, 1999
- CARRASQUEL, Miriam**, Spanish/ESL. Ph.D., University of Northern Colorado, 2014; M.A., University of Kansas, 1990; B.A., Instituto Universitario Pedagógico de Caracas, 1986
- CASE, Nancy**, Nursing. Ph.D., University of Colorado Boulder, 1991; B.S., Simmons College, 1967
- CASTELLON, Michael**, Geography. Ph.D., University of Wisconsin, 1996; M.S., University of Wisconsin, 1992; B.A., Colgate University, 1985
- CASTEN, Nancy**, Mathematics. M.S., Colorado State University, 1991; B.S., Rockford College, 1989; A.S., Rock Valley College, 1986
- CASTRO, Liliana**, Spanish. Ph.D., Colorado State University, 2011; M.A., Colorado State University, 1993; M.A., Colorado State University, 1993; B.A., Universidad Nacional de Cuyo, Argentina, 1979
- CHARLES, Debra**, Health Information Technology. B.S., Colorado State University, 1982
- CHOUN, James**, Biology. M.A., University of California Santa Barbara, 1977; B.A., University of Colorado, 1973
- COCKERHAM, Bryan**, Mathematics. M.Ed., Texas State University-San Marcos, 2007; B.S., Texas State University-San Marcos, 2005
- COLE, Kelli**, English. M.A., University of London, 2005; B.A., University of Colorado, 2001
- COLLINS, Joseph**, Astronomy/Physics. Ph.D., University of New Mexico, 2001; B.S., University of North Carolina, 1993
- COMPTON, Lisa**, Architectural Technology. B.A., Arizona State University, 1979
- COOMBS, Abel**, Business/Marketing. J.D., Howard University, 1998; M.B.A., Pace University, 1988; B.A., Skidmore College, 1984
- COSTA, Syndra**, Nursing. M.S., Regis University, 2012; B.S., Regis University, 2004
- CRAINE, Donna**, English. M.A., University of Wyoming, 1980; B.A., University of Wyoming, 1978
- CRAVEN, Deborah**, Multimedia Graphic Design. M.F.A., Colorado State University, 2013; B.A., Colorado State University, 1993
- CROSS, John**, Art. M.F.A., Fontbonne University, 1999; B.A., Southern Illinois University Edwardsville, 1996
- CRYAN, Gary**, Automotive Service Technology. B.S., State University of New York, 1974; A.A.S., State University of New York, 1972
- CUMMINGS, Charles**, Philosophy. Ph.D., Dallas Theological Seminary, 2014; M.T., Dallas Theological Seminary, 1994; B.A., University of Texas, 1987
- DANANAY, Lynn**, Nursing. M.S.N., University of Northern Colorado, 2008; B.S.N., University of Northern Colorado, 1996
- DANNAHOWER, Heather**, Forestry/Wildlife. B.S., Kansas State University, 2002
- DAUGHERTY, Ray**, Horticulture. B.S., Colorado State University, 1988
- DAVIE, Teresina**, Hospitality. M.S., Old Dominion University, 1999; B.S., Old Dominion University, 1996
- DAVIS, Joseph**, Automotive Technology. A.A.S., Des Moines Area Community College, 1973
- DEBELL, Jannette**, Dental Assisting. B.S., Colorado State University, 1993
- DECOSMO, Andrea**, Mathematics. M.Ed., University of Missouri-Columbia, 1993; B.A., Saint Mary's College, 1991
- DELGADILLO, Erica**, Communications. M.A., San Diego State University, 2002; B.S., San Diego State University, 1999
- DEROCHE, Andrew**, History. Ph.D., University of Colorado, 1997; M.A., University of Maine, 1993; B.A., Princeton University, 1989
- DESMARTEAU, Jeffrey**, Nursing. B.A., University of Colorado Boulder, 2003
- DEUTSCH, Robert**, Criminal Justice. M.A., University of Colorado, 1973; B.A., State University College, 1971
- DINWIDDIE, Alan**, Mathematics. M.A., University of Nebraska, 1994; M.S., Pensacola Christian College, 1982; B.S., Kearney State College, 1979
- DODARO, Kathleen**, Business. Ph.D., Capella University, 2006
- DUARTE, Victor**, Nursing. M.S.N., University of Northern Colorado, 2007; B.S., University of Northern Colorado, 1997
- DUKSTEIN, Karl**, Media Arts. M.F.A., Southern Illinois University, 1990; B.A., Grinnell College, 1983
- DVORSKY, Christy**, Welding. A.S.S., Front Range Community College, 2012
- EDWARDS, Nicola**, Dental Assisting. B.S., Colorado State University, 2000

- EISELE, Victoria**, Computer Science/Computer Information Systems. M.S., American University, 1986; B.A., Bethany College, 1982
- EISENLAU, Jennifer**, English. Ph.D., University of Denver, 1997; M.A., University of Northern Colorado, 1991; B.A., University of Vermont, 1987
- ERLICH, Stewart**, Developmental English. M.Ed., Rutgers State University of New Jersey, 2000; B.A., Rutgers State University of New Jersey, 1995
- FALTINSON, Susan**, ASL/IPP. M.S., University of Wisconsin-Madison, 1990; B.S., University of Wisconsin-Madison, 1988
- FEINHANDLER, Ian**, Geography Information Systems. Ph.D., University of Colorado-Boulder, 2006; M.A., University of Colorado-Boulder, 2003; M.A., University of Colorado-Boulder, 1995; B.A., Trinity College, 1988
- FLOYD, Kenneth**, Clean Energy Technology. M.S., Colorado State University, 2002; B.S., Colorado State University, 1988
- FOSTER, William**, English. M.A., Colorado State University, 2004; B.A., Colorado State University, 1997
- FREDRICKSON, Lana**, Mathematics. M.A., University of Northern Colorado, 1989; B.A., College of Southern Utah, 1973
- GARBER, Steven**, Chemistry. Ph.D., Boston College, 2004; B.A., California Polytechnic State University, San Luis Obispo, 1997
- GARRY, Kevin**, Music. D.M.A., University of Colorado, 2000; M.A., Washington State University, 1994; B.A., University of Washington, 1991; B.G.S., University of Iowa, 1977
- GEIST, Monica**, Mathematics. Ph.D., University of Northern Colorado, 2008; M.S., University of Colorado, 1996; B.S., Colorado State University, 1984
- GILANYI, Robert**, Computer Information Systems. M.S., Mammoth University; 1991; B.A., Trenton State College, 1973
- GILLILAND, Mary (Claire)**, Nursing. M.S.N., University of Northern Colorado, 2003; B.S., University of Florida, 1999
- GOMEZ, Christy**, Mathematics. M.A., Rutgers University-Camden, 2007; B.A., University of Delaware, 2000
- GOMEZ, Fortino**, English. M.F.A., Naropa University, 2007; B.A., Arizona State University at the Tempe Campus, 1997
- GONZALES, Martha**, Sociology. M.A., University of Colorado, 1993; B.A., University of Colorado, 1988; B.S., University of Colorado, 1970
- GOWDY-WYGANT Cecilia**, History. Ph.D., Texas Tech University, 2007; M.A., Texas Tech University, 2004; B.A., Texas Tech University, 2003
- GRAHAM, Patricia**, Nursing. M.S.N., University of Colorado, 2008; B.S.N., University of Colorado, 2006; A.A.S., Front Range Community College, 2000
- GRIM, Mary**, History. M.A., University of Colorado, 2007; B.A., Virginia Tech, 1997
- GUENTHER, Juliana**, Nursing. B.S., University of Colorado, Boulder, 1983
- GUTERMAN, Lori**, Multimedia Graphic Design. Diploma, Art Institute of Colorado, 1995; B.A., University of Miami, 1982
- GUTHRIE, Brad**, Advanced Technology (HVAC). A.A.S., Community College of Denver, 1988
- HAHN, James**, Architectural and Construction Technology. B.S., Millersville University of Pennsylvania, 1983
- HANAK, Kristin**, Nursing. M.S.N., University of California, 1997; B.S.N., University of California, 1995
- HEIDEMAN, Anthony**, History. M.A., University of Colorado, 1998; B.A., University of Colorado, 1983
- HEUERMAN, Joshua**, Welding. A.A.S., Welding Front Range Community College, 2011
- HEUSTON, Christin**, Health and Wellness. M.A., University of California, Los Angeles, 1991; B.A., Colorado State University, 1988
- HILL, John**, Humanities/Theatre. M.F.A., University of Nebraska-Lincoln, 1982; B.A., Loretto Heights College, 1980
- HILL, Mary**, Sociology. Ph.D., University of Illinois, 1977; M.A., University of Illinois, 1974; B.A., Washington State University, 1971
- HOKE, Cheryl**, Chemistry. M.S., Colorado State University, 1984; B.A., Dana College, 1978
- HOLLY, Amy**, Communications. M.F.A., Colorado State University, 2010
- HUFF, Alyson**, Philosophy. M.A., Colorado State University, 2005; B.A., St Cloud State University, 2002
- HUIBREGTSE, Melanie**, Medical Careers., M.S., Colorado State University, 1986
- HUNTLEY, BT**, History. Ph.D., New York University, 1988; M.A., New York University, 1984; B.A., Drake University, 1981
- HUSSEY, John**, English. M.A., Colorado State University, 2007; B.A., Wheaton College, 2004
- IHLENFELDT, Susan**, Nursing. M.S.N., University of Colorado, 1988; B.S., University of Wisconsin, 1978
- IRWIN, Stephanie**, Anatomy and Physiology. M.S., Colorado State University, 1992; B.A., University of Colorado, 1987
- JACKSON, Elizabeth**, English. M.A., Colorado State University, 2002; B.A., Towson University, 1999
- JACOBSON, Anne Marie**, Early Childhood Education, M.Ed., Northern Arizona University, 2011
- JOHNSON, Mark**, Emergency Medical Services. B.S., Colorado State University, 1990
- JORDAN-HELSE, Anna**, Nursing. M.S., Regis University, 2008
- KEENAN, Catlyn**, Philosophy. Ph.D., University of Denver, 2014; M.A., University of Colorado, 2001; B.A., Hendrix College, 1997
- KELLEY, Guy**, Paralegal. J.D., University of Denver, 1988; B.A., University of Colorado, Boulder, 1977
- LARABEE, Patrick**, Biology. Ph.D., Logan College of Chiropractic, 1996; B.S., Logan College of Chiropractic, 1995
- LEE, Jennifer**, Natural Resources. M.S., Colorado State University, 2003; B.A., University of California-Santa Barbara, 1994

- LEE, Shawna**, Computer Assisted Drafting. A.A.S, Front Range Community College, 2004
- LEFF, Aaron**, Developmental English. M.A., Colorado State University, 2007
- LEWANDOWSKI, April**, English. M.A., Western Carolina University, 1998; B.A., Asbury College, 1995
- LEY, Keith**, CIS/CNG. M.S., Montclair State University, 2007; B.S., The State University of New Jersey-Rutgers, 1987
- LOMBARD, Gwen**, Veterinary Technology. M.S., Colorado State University, 1993; D.V.M., Colorado State University, 1990; B.S., Colorado State University, 1986
- LONG, Jeffrey**, History. M.A., Northern Arizona University, 2005; History, B.A., Western Michigan University, 1994
- LONGSHORE, Mark**, Nursing. J.D., University of Denver, 2012; M.S.N., Northern Kentucky University, 2002; B.S.N., University of Cincinnati, 1996
- LOSEKE, Jennifer**, Mathematics. M.A., National University, 2002; B.S., San Diego State University, 1997
- LOY, Ivan**, Mathematics. M.S., University of Wyoming, 1998; B.S., University of Nebraska, 1992
- MAC, Christine**, Developmental Mathematics. M.A., University of Northern Colorado, 2009; Mathematics. B.S., Eastern Michigan University, 2005
- MAHONEY, Jessica**, Psychology. M.A., Denver Seminary, 2005
- MALARA, Katherine**, Chemistry. M.Ed., Arizona State University, 2003
- MANN, Amy**, English. M.A., University of Denver, 2001; B.A., University of Northern Colorado, 1994
- MANUEL, Laura**, Psychology and Criminal Justice, Ph.D., University of Northern Colorado, 2000; M.A., University of Northern Colorado, 1991; B.A., University of Michigan, 1973
- MARTIN, Debra**, Mathematics. M.S., University of Nebraska, 2000; B.S., University of Nebraska, 1993
- MASON, Beverly**, Accounting. B.S., Middle Tennessee State University, 1975
- MATTSON, Mary**, Chemistry. Ph.D., University of California, 1988; M.S., University of California, 1986; B.A., Barat College, 1982
- MCFARLANE, Kevin**, Accounting. D.B.A., 1994; M.B.A., University of Connecticut, 1978
- MCCRATH, Susan**, Biology. M.S., Colorado State University, 2007; B.S., Colorado State University, 2001
- MCMILLAN, Angelica**, Spanish. M.A., University of New Mexico, 1996; B.A., University of California, 1993
- MEDEIROS, Michelle**, English. M.A., Indiana University, 2001; B.A., University of Oregon, 1999
- MELARA, Jose Gustavo**, Spanish. M.A., University of Colorado, 1993; B.A., Queens University, 1991
- MELLINGER, Bernadine**, Nursing. M.S., University of Phoenix, 2011; B.S., University of Phoenix, 2009; A.A.S., Garden City Community College, 1989
- MENNEN, Kathleen**, English. M.A., Grand Valley State University, 1998; B.A., Ball State University, 1984
- MENZIES, April**, Career Education. Ph.D., Kansas State University, 2001; M.S., Kansas State University, 1992; B.S., Kansas State University, 1991; A.A., Hutchinson Community College, 1989
- MILLER, Max**, Geography. M.S., University of Wyoming, 2009; B.S., University of Wyoming, 2005
- MINORS, John**, Astronomy. Ph.D., Columbia Pacific University, 1996; M.A., Columbia Pacific University, 1992; B.M.E., University of Wisconsin, 1971
- MITCHELL, Kerri**, English. M.A., Colorado State University, 2001; B.A., Fredonia State University, 1998
- MONKS, Kenneth**, Mathematics. Ph.D., Colorado State University, 2012; M.S., Colorado State University, 2008
- MOORE, Catherine**, Medical Office Technology; A.A.S., Front Range Community College, 2007
- MORRISON, Spencer**, Psychology. Ph.D., University of Colorado, 1995; M.S., Villanova University, 1992; B.S., Wake Forest University, 1986
- MOZER, Clark**, Clean Energy Technology. M.S., Montana State University, 1974; B.S., Montana State University 1972
- MULLINS, Kathleen**, English. M.A., Western Washington University, 2006
- MURPHY, Thora Jo**, Early Childhood Education. M.A., University of Colorado, 1992; B.S., Central Missouri State University, 1976
- MUSSER, Gregg**, Automotive Service Technology. Certificate Auto/Mechanics Technician, 2008
- NGUYEN-GARCIA, Karen**, Health Information Technology. M.S., Colorado State University-Global, 2012; B.S., Kaplan University, 2010
- NYE, Bruce**, History. Ph.D., University of Illinois, 2009
- OBARSKI, Ann**, Librarian. M.A., University of Denver, 1970; B.A., University of Denver, 1969
- OLIVER, Blair**, English. Ph.D., University of Denver, 1996; M.F.A., University of Montana, 1991; B.A., Dickinson College, 1988
- ORTMAN, Joan**, Nursing. M.S., Saint Louis University, 1986; B.A., University of Illinois-Springfield, 1978
- PATTERSON, Barbara**, Forestry/Wildlife. Ph.D., Colorado State University, 2009; B.S., University of Wisconsin, 1981
- PENDLETON, Samuel**, Emergency Medical Services. B.S., Maranatha Baptist Bible College, 2000
- PERRY, Merry**, Medical Careers. L.P.N., State of Nebraska, 1971
- PIPPIN-MANDLEY, John**, Psychology. M.A., Northern Arizona University, 2000; B.A., Metropolitan State College of Denver, 1994
- PLATT, David**, Mathematics. Ph.D., University of Texas, 1990; M.S., University of South Carolina, 1987; M.S., Colorado State University, 1981; B.A., Western Connecticut State College, 1975
- POOLER, James**, Automotive Technology. B.S., University of New Mexico, 1997

- QUINTANA, Rita**, Mathematics. M.A., University of Colorado, 1991; B.A., University of Colorado, 1986
- RANALLO, Pamela**, Spanish. M.A., State University of New York, 1992; B.A., State University of New York, 1990
- RASKE, Tara**, Animal Technology. B.A., Fort Lewis College, 1991
- REINKING, Cory**, History. M.A., University of California, Riverside, 2008
- RENDAL, Camille**, Art. M.F.A., New Mexico State University, 1996; B.F.A., Otis Parsons, 1987
- RENO, Nancy**, Nursing. M.S., University of Northern Colorado, 2012
- REYNOLDS, Katheryn**, Accounting. M.S., University of Phoenix, 2014; B.S., Regis University, 2011
- REYNOLDS, Stacey**, Mathematics. M.S., Utah State University, 2009; B.S., Slippery Rock University of Pennsylvania, 2007
- RICHARDS, Margaret**, Anatomy & Physiology. Ph.D., University of Illinois, 2006; Biological Sciences, B.A., University of Colorado, 1998
- RIEDL, Ann**, Biology. Ph.D., Case Western University, 1994; B.S., University of Notre Dame, 1985
- RITCHIE, Elsie**, American Sign Language. M.A., Gallaudet University, 2011; B.A., Gallaudet University, 2008
- ROCKS, Lindsay**, Astronomy. Ph.D., University of Wisconsin, 2008; M.A., University of Wisconsin-Madison, 2003
- ROGERS, Gerald**, Paralegal. J.D., University of Denver, 1988; B.A., University of Northern Colorado, 1984
- ROMERO, Christopher**, Biology. Ph.D., Colorado State University, 2009; M.S., University of Denver, 1991; B.A., University of Denver, 1989
- ROMERO, Claudia**, Computer Aided Drafting. M.Ed., Colorado State University, 2006; B.S., Colorado State University, 1989; A.A., Aims Community College, 1987
- ROSE, Timothy**, Automotive Technology. B.S., So Illinois University, Carbondale, 2002
- ROSENBERG, Mernie**, Early Childhood Education. M.Ed., University of Lesley, 2000
- ROSTAD, Teresa**, Nursing. M.S.N., Walden University, 2011; B.S.N., South Dakota State University, 2002
- RUBERTO, Michael**, Multimedia Graphic Design. B.F.A., Fredonia, 2003
- RUDD, Bobbie J.**, Nursing. M.S., Regis University, 2012
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- RUIZ, Janet**, Nursing. M.S.N., North Park University, 2002; B.S., University of Illinois, 1998
- RUSSELL, Gregory**, Emergency Medical Services. Certificate for Paramedic Education, 1998
- RUSSELL, Randy**, English. M.A., University of Colorado, 1989; B.A., Metropolitan State College of Denver, 1981
- SALAHUB, Eric**, Philosophy. M.A., Colorado State University, 1994; B.S., Whitman College, 1990
- SCHERNECKE, Christi**, Nursing. M.S., Regis University, 2009
- SCHMIDT, Kimberly**, Veterinary Technician. A.A.S., Bel-Rea Institute Veterinary Technician Training, 2000
- SEID, Jaren**, Economics. M.A., San Diego State University, 2009; B.A., California State University-San Marcos, 2006
- SEVY, Suzanne**, Nursing. B.S.N., University of Colorado, 1988
- SHABRAM, Patrick**, Geography. M.A., San Jose State University, 1998; B.A., University of Colorado, 1990
- SHAEFER, Dana**, Mathematics. M.E., University of Colorado, 1994; B.S., University of Colorado, 1991
- SHEAMAN, Todd**, Emergency Medical Services. A.G.S., Front Range Community College, 2006
- SHEPTON, Kim**, Nursing. M.S.N., Regis University 2007; B.S.N., University of Northern Colorado, 1980
- SHERRICK, Laura**, Psychology. Ph.D., Iowa State University, 1990; M.S., Iowa State University, 1988; B.A., DePauw University, 1984
- SIEMS, Mary**, Mathematics. M.S., Oakland University, 1998; M.S., University of Minnesota, 1985; B.S., Saint Mary's College, Notre Dame, Indiana, 1983
- SKILES, David**, Geography Information Systems. M.A., Regis University, 2008; B.S.E.E., University of Colorado, 1981
- SLOAN, Andrea**, Emergency Medical Services. B.S., University of Northern Colorado, 2005; B.A., Brigham Young University, 1991
- SMITH, Barbara**, Nursing. M.S.N., University of Northern Colorado, 1994; B.S.N., University of Northern Colorado, 1991
- SMITH, Heidi**, Anatomy & Physiology/Microbiology. M.S., Bowling Green State University, 2003; B.S. Taylor University, 1996
- SMITH, Michael**, Astronomy. M.A., University of Wyoming, 1999; M.A., University of Northern Colorado, 1998; B.S., University of Wyoming, 1994; B.S., University of Wyoming, 1993; A.A., Arts/Science, Laramie County Community College, 1989
- SODEN, Debra**, Business. M.S., Colorado State University-Global, 2012
- SPARKS, Shelly**, Nursing. M.N., University of Phoenix, 2014; B.S.N., University of Phoenix, 1996
- STEARNS, Kristine**, Criminal Justice. M.A., University of Northern Colorado, 1991; B.A., University of Northern Colorado, 1988
- STECKER, Elsie**, American Sign Language. B.A., Gallaudet University, 2008
- STEVENS, James**, Health and Wellness. M.S., Colorado State University, 2003
- STILWELL, Matthew**, English. M.A., Colorado State University, 2000; B.A., University of Wisconsin, 1991
- STITES, Tiffany**, Business. M.S., University of Missouri-Columbia, 2004; B.S., University of Missouri-Columbia, 2003
- STOW, Brandon**, Communications. M.A., Texas Tech University, 2005; B.S., West Texas A&M University, 2002
- STOW, Chelsea**, Communications. M.A., Texas Tech University, 2005; B.A., West Texas A&M University, 2003
- STRANG, Heidi**, Art. Ph.D., University of Colorado Denver, 2006

- STRICKLEN, Michelle**, American Sign Language. B.A., Gallaudet University, 2010
- SULLIVAN, John**, English. Ph.D., National University of Ireland, 1998; M.A., National University of Ireland, 1988; B.S., Columbia College, New York, 1986
- SUN, Jingxian**, Chemistry. Ph.D., University of Rhode Island, 1998
- SUTCLIFFE, Amy**, English. M.A., University of Northern Colorado, 2011; B.A., University of Northern Colorado, 2008
- ZWANKOWSKI, Marcus**, Mathematics. M.S., Northern Arizona University, 2005; B.S., University of Nevada, 2001
- TANG, Yong**, Biology. Ph.D., Dalhousie University, Halifax, 1989; M.S., Dalhousie University, Halifax, 1985; B.S. (Hon), Xiamen University, 1985
- THIELKE, Alison**, Early Childhood Education. M.A., University of Colorado-Boulder, 2007; B.A., Pacific Oaks College, 2002
- THOMPSON, Chera**, Mathematics. M.A., University of Missouri-Columbia, 1987; B.A., Southeast Missouri State University, 1982
- THROGMORTON, Debra**, Music. M.M., University of Northern Colorado, 1981; B.M., University of Wyoming, 1981
- TINDALL, Thompson**, Welding.
- TOFOLLI, Todd (Reno)**, Automotive Technology. A.A.S., Front Range Community College, 2000; B.A., University of Minnesota, 1993
- TRUMMER, Kathleen**, Nursing. M.S.N., University of Colorado, 1992; B.S.N., Viterbo College, 1987
- VAIDYA, Anjali**, Microbiology. Ph.D., Indian Agricultural Research Institute, 1987
- VAN, Shawna**, English Developmental Writing/Composition. M.A., Colorado State University, 1998; B.A., University of Northern Colorado, 1993
- VAN DE KAMP, Jennifer**, Biology. Ph.D., University of Colorado, 1991; B.S., University of Colorado 1984
- VERNON, James**, Business. Ph.D., Pardee Rand, 1996; M.Phil., Pardee Rand, 1986; B.A., Brown University, 1982
- VILLIERS, Suzanne**, Nursing. M.S., University of California, 1992; B.S., Seattle University, 1975
- VINCENT, Nowell**, Interior Design. B.A., Colorado State University, 2007; Performing Arts. B.A., Colorado State University, 1998
- VOSS, James**, Mathematics. M.A., San Francisco State University, 1996; B.A., University of Colorado, 1992
- VOSS, Julie**, English. M.A., San Francisco State University, 1999; B.A., San Francisco State University, 1995
- WAGNER, Richard**, Early Childhood Education. M.A., Northern Arizona University, 1984; B.S., University of Wisconsin, 1976
- WAGNER, Sharon**, Computer Information Systems. M.B.A., University of Houston, Victoria, 1984; B.A., University of Houston-Main Campus, 1981
- WALKER, Megan**, Nursing. B.S., University of Northern Colorado, 2003
- WALSH, Jason**, Welding/ IDT AutoCad. A.A., Front Range Community College, 2003
- WALTMAN, Diane**, Horticulture. M.S., Colorado State University, 2000; B.S., Colorado State University, 1978
- WATT, Charles**, Automotive Technology. B.S., Southern Illinois University, 1975
- WENTE, Clara**, Physics. M.A., University of Colorado, 1994; B.S., University of Puget Sound, 1991
- WEST, Misty**, Emergency Medical Services. B.A., Metropolitan State College of Denver, 2003
- WILLIAMS, Kari**, Medical Office Technology. D.R., Life University, 1998; B.S., Colorado State University, 1994; A.A., Northeastern Junior College, 1991
- WILSON, Matthew**, Economics. Ph.D., University of Texas, 2000; M.A., University of Colorado, 1991; BA, Fort Lewis College
- WINNER, Wilson**, Physics. M.B.A., Santa Clara University, 2005; M.S., University of California–Santa Barbara, 1980; B.S., University of California–Santa Barbara, 1978
- WYGANT Cecilia**, History. Ph.D., Texas Tech University, 2007; M.A., Texas Tech University, 2004; B.A., Texas Tech University, 2003
- YAMIOLKOSKI, Steven**, Mathematics. M.S., University of Colorado – Colorado Springs, 2003; B.A., University of Colorado-Colorado Springs, 2000
- YAROMY, Joanna**, Holistic Health. B.S., Colorado State University, 1986
- YATES, Christopher**, Computer Aided Drawing. A.A.S., Saint Louis Community College, 1992
- ZUR NAYBERG, Ayelet**, Economics. M.B.A., Tulane University, 2006; B.A., University of Haifa, 1999

LEGAL NOTICES

Rights Reserved

The college reserves the right to change any provision or requirement of this catalog, including academic calendar dates, tuition, and fees, pursuant to law, the rules of the State Board for Community Colleges and Occupational Education, or the Colorado Community College and Occupational Educational System, or college policy.

The college reserves the right to cancel any course or program described in this catalog, at any time, without notice, and to change any other aspect of any course or program.

The college reserves the right to require a student to withdraw at any time for health or other reasons, pursuant to appropriate policies and procedures, and to impose sanctions, according to established policy. Any admission based on false statements or documents may be grounds for dismissal and loss of all credit for work that may have been completed.

Your Right to Know

FRCC provides information about completion and graduation rates on the FRCC website. Information about crimes on campus and campus security programs are published in the class schedule each semester and are available from the Campus Security and Preparedness Office. This is in compliance with the Federal Student Right to Know and Campus Security Act of 1990. Individuals interested in knowing about FRCC's financial status are assured that FRCC is subject to the State's Open Records Act, as an agency of the State of Colorado. The audited financial statements of the CCCOES System, including those for FRCC, are available to the public in the libraries of the Westminster and Larimer Campuses.

Academic Freedom

FRCC believes that education should help students function well in a dynamic society. To do so, students must gain knowledge and cultivate critical thinking skills. FRCC faculty believes that no restrictions should hamper the spirit of investigation, free inquiry, and open discussion in the classroom. Faculty exercises professional judgment in selecting and interpreting ideas. They have the freedom to choose the methods of instruction, guidance, tutoring, testing, and evaluation to achieve these goals.

Campus Security and Preparedness

In compliance with the Crime Awareness and Campus Security Act of 1990, also known as the Jeanne Clery Act, campus crime statistics and information on campus security policies are available to current and potential students through the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics. The complete Annual Security Report can be found on the FRCC website at <http://www.frontrange.edu/docs/default-source/Being-a-Student/safety-security/campus-security-report.pdf?sfvrsn=4>

For further information about the Clery Act or campus security in general, please contact the Administration office for the Department of Campus Security and Preparedness at 970-204-8453.

Equal Opportunity

Since its beginning in 1968, FRCC has had a policy of nondiscrimination in employment and education. FRCC's Equal Opportunity and commitment to diversity reflects the college's continued commitment to implementing that policy.

The College prohibits and will not tolerate discrimination or harassment that violates federal law, state law, Board Policy 3-120 or Board Policy 4-120. The College does not discriminate on the basis of gender, sex, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity or sexual orientation. The College complies with Titles VI and VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Education Amendments of 1972 (Title IX), the Age Discrimination in Employment Act, the Rehabilitation Act of 1973, the Americans with Disabilities Act Amendments Act of 2008, Pregnancy Discrimination Act of 1978, Vietnam Era Veterans Readjustment Assistance Act of 1974; Executive Order 11246, and sections 24-34-301, C.R.S. et seq.

For information regarding civil rights or grievance procedures, contact: Paul M. Meese, FRCC, College-wide, Title IX Compliance/Equal Opportunity Officer and Executive Director, Organizational Development and Human Resources, 303-678-3707, 2190 Miller Drive, Longmont, CO 80501, or paul.meese@frontrange.edu. Grievance procedures for Title IX, Section 504, and ADAAA have been established for students and employees who believe that discrimination has occurred.

FACTA Notification to Students

In accordance with the Fair and Accurate Credit Transactions Act (FACTA) of 2003, FRCC adheres to the Federal Trade Commission's (FTC) Red Flag Rule (A Red Flag is any pattern, practice, or specific activity that indicates the possible existence of identity theft.), which implements Section 114 of the FACTA and to the Colorado Community College System's Identity Theft Prevention and Detection Program, which is intended to prevent, detect and mitigate identity theft in connection with establishing new covered accounts or an existing covered account held by the Colorado Community College System (System or CCCS) or one of its thirteen (13) community colleges, and to provide for continued administration of the Program. If a transaction is deemed fraudulent, appropriate action will occur. Action may include, but is not limited to, cancelling of the transaction, notifying and cooperating with law enforcement, reporting to the Student Code of Conduct Office, and notifying the affected parties. For more information on FACTA, Red Flag Rules, and Identity Theft Consumer Information, please see the links provided below.

Federal Trade Commission
Statute: <http://www.ftc.gov/os/statutes/fcradoc.pdf>

Red Flag
Rules: <http://www.ftc.gov/bcp/edu/microsites/redflagrule/index.shtml>

Identity Theft Consumer
Information: <http://www.consumer.ftc.gov/features/feature-0014-identity-theft>

Family Education Rights and Privacy

Privacy: Front Range Community College Notification of Rights Under FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. FERPA rights are afforded to students at the time of admission. These rights include:

1) The right to inspect and review the student's education records within 45 days of the date that Front Range Community College receives a request for access. A student must submit to the Admissions and Records Office a written request that identifies the record(s) the student wishes to inspect. The Registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Registrar, they shall advise the student of the correct official to whom the request should be addressed.

2) The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights. A student who wishes to ask Front Range Community College to amend a record should write the Registrar, who will notify the college official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If the College decides not to amend the record as requested, the College will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3) The right to provide written consent before Front Range Community College discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is disclosure to College officials with legitimate educational interests. A College official is a person employed by the College in an administrative, supervisory, academic, research, volunteers, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the College has contracted as its agent to provide a service instead of using college employees or officials (such as an attorney, auditor, or collection agent); a person serving on the College Board; or state and federal agencies, such as the U.S. Department of Veterans Affairs, or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. FRCC has designated the National Student Clearinghouse as a College official. A College official (includes FRCC advisors for PTK, NSLS, and other honorary or leadership programs) has a legitimate educational interest if the official needs to review education records in order to fulfill his or her professional responsibilities for the College. Upon request, the college discloses education records, without a student's consent to officials of another school in which a student seeks or intends to enroll, or after enrollment.

The College may share educational records with parents in the following circumstances: for a student who is dependent under I.R.S. tax code; a student under 21 years old who has violated a

law or the school's rules or policies governing alcohol or substance abuse; and when the information is needed to protect the health or safety of the student or other individuals in an emergency. Requests from parents to access student information under the tax code should be sent to the Office of the Registrar.

FERPA Annual Notice to Reflect Possible Federal and State Data Collection and Use. As of January 3, 2012, the U.S. Department of Education's FERPA regulations expand the circumstances under which your education records and personally identifiable information (PII) contained in such records—including your Social Security Number, grades, or other private information—may be accessed without your consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or state and local education authorities ("Federal and State Authorities") may allow access to your records and PII without your consent to any third party designated by a Federal or State Authority to evaluate a federal- or state-supported education program. The evaluation may relate to any program that is "principally engaged in the provision of education," such as early childhood education and job training, as well as any program that is administered by an education agency or institution. Second, Federal and State Authorities may allow access to your education records and PII without your consent to researchers performing certain types of studies, in certain cases even when we object to or do not request such research. Federal and State Authorities must obtain certain use-restriction and data security promises from the entities that they authorize to receive your PII, but the Authorities need not maintain direct control over such entities. In addition, in connection with Statewide Longitudinal Data Systems, State Authorities may collect, compile, permanently retain, and share without your consent PII from your education records, and they may track your participation in education and other programs by linking such PII to other personal information about you that they obtain from other Federal or State data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student records systems.

The Colorado Community College System considers the following to be directory information and Front Range Community College staff may disclose this information, without prior consent, to anyone inquiring in person, by phone, or in writing: student name; major field of study; participation in officially recognized activities and sports; dates of student attendance, enrollment status (i.e. full-time, three-quarter-time, half-time, less than half-time, withdrawn, graduated or deceased); degrees/certificates and awards student has earned; and the most recent educational institution attended by the student. Directory information is limited to the current academic year only.

Addresses (including mail and e-mail) are considered PII and are not released as Directory Information except for the following:

- Graduation lists released to news media, which may include the student's city of residence.
- Other listings to the news media and college personnel for special awards, honors, and events.

Notification to Phi Theta Kappa Honor Society and other academic honor societies for students who are eligible to be considered for membership

Additionally, name, address, phone number, date and place of birth, level of education, most recently attended college, field of study, and degree(s) received of students may be released to military recruiters upon request in accordance with the Solomon Amendment. All other information contained in student records is considered private and not open to the public without the student's written consent. Students who do not want their directory/public information released to third parties or students who do not want to be listed in the College online e-Directory should complete a form to suppress directory information available online or at the Registrar's Office or Office of Admissions and Records by the first day of the semester.

All other information contained in student records is considered private and not open to the public without the student's written consent. Students who do not want their directory/public information released to third parties should complete the **Request to Prevent Disclosure of Directory Information** form to suppress directory information; the form is available online, at the Registrar's Office, or at the Office of Admissions and Records, and must be submitted by the first day of the semester.

4) The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5901

Notice of Non-Discrimination Statement

Front Range Community College prohibits all forms of discrimination and harassment including those that violate federal and state law, or the State Board for Community Colleges and Occupational Education Board Policies 3-120 or 4-120. The College does not discriminate on the basis of sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity or sexual orientation in its employment practices or educational programs and activities. Front Range Community College will take appropriate steps to ensure that the lack of English language skills will not be a barrier to admission and participation in vocational education programs.

The College has designated Paul M. Meese, Executive Director, Organizational Development & Human Resources, as its Affirmative Action Officer/Equal Opportunity Coordinator/Title IX Coordinator with the responsibility to coordinate its civil rights compliance activities and grievance procedures. For information, contact Paul M. Meese, 2190 Miller Drive, Longmont, CO 80501, paul.meese@frontrange.edu, (303) 678-3707.

You may also contact the Office for Civil Rights, U.S. Department of Education, Region VIII, Federal Office Building, 1244 North Speer Boulevard, Suite 310, Denver, CO 80204, telephone (303) 844-3417.

If a recipient's service area contains a community of national origin minority persons with limited English language skills, public notification materials must be disseminated to that community in its language.

FRCC Civil Rights Grievance and Investigation Process Basis

Board Policy (BP) 3-120 and BP 4-120 provides that employees and students shall not be subjected to unlawful discrimination and/or harassment on the basis of sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity or sexual orientation in its employment practices or educational programs and activities.

Procedure

This FRCC procedure, adapted from the National Center for Higher Education Risk Management (NCHERM) and the Association of Title IX Administrators (ATIXA), should be applied to all civil rights grievances.

Definitions

Complainant(s) is a person who is subject to alleged protected class discrimination, harassment or related retaliation. For purposes of this procedure, a complainant can be an FRCC Employee(s), student(s), authorized volunteer(s), guest(s), or visitor(s).

Respondent(s) is a person whose alleged conduct is the subject of a complaint. For purposes of this procedure, a respondent can be an FRCC employee(s), student(s), authorized volunteer(s), guest(s) or visitor(s).

Title IX Coordinator(s) and Title VI and VII Coordinator(s) (EO Coordinator) is the employee(s) designated by the college president to oversee all civil rights complaints for both employees and students.

Appointing Authority/Disciplinary Authority is the individual with the authority or delegated authority to make ultimate decisions concerning a particular student. A Disciplinary authority is the individual who or office that has the authority or delegated authority to impose discipline upon a particular employee or student. The Chief Student Services Officer (CSSO) is the individual designated by the College President to administer student affairs and be responsible for administering the college's Student discipline, including student discipline.

Investigator(s) is the person(s) charged to investigate the civil rights grievance by the Title IX and/or the EO Coordinator. This person can be referred to as the "Deputy Title IX and/or EO Coordinator(s)".

Discrimination is:

- any distinction, preference, advantage for or detriment to an individual compared to others that is:
- based upon an individual's actual or perceived sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity, or sexual orientation, that is so severe, persistent or pervasive, and
- that unreasonably interferes with or limits:
 - Employee's employment conditions or deprives the individual of employment access or benefits.
 - Student's ability to participate in, access, or benefit from the college's educational program or activities.

- Authorized volunteers' ability to participate in the volunteer activity.
- Guests and visitors' ability to participate in, access, or benefit from the college's programs.

Discriminatory Harassment is:

- detrimental action based on an individual's actual or perceived sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity or sexual orientation, which is
- severe, persistent or pervasive that it unreasonably interferes with or limits:
 - Employee's employment conditions or deprives the individual of employment access or benefits.
 - Student's ability to participate in, access, or benefit from the college's educational program or activities.
 - Authorized volunteers' ability to participate in the volunteer activity.
 - Guests and visitors' ability to participate in, access, or benefit from the college's programs.

Retaliatory Harassment is:

any adverse employment or educational action taken against a person because of the person's perceived participation in a complaint or investigation of discrimination and/or harassment based on federal or state civil rights laws.

- It is a violation of this procedure to engage in retaliatory acts against any person who reports an incident of discrimination and/or harassment, or any person who testifies, assists or participates in a proceeding, investigation or hearing relating to such allegation of discrimination and/or harassment. Such act will be subject to discipline, up to and including expulsion for students, termination for FRCC employees, and dismissal for authorized volunteers, guests or visitors.\

Sexual Misconduct offenses include, but are not limited to:

- Sexual Harassment
- Non-Consensual Sexual Contact (or attempts to commit same)
- Non-Consensual Sexual Intercourse (or attempts to commit same)
- Sexual Exploitation
- For more information on sexual misconduct please refer to SP 3-120a and SP 4-120a.

Complaint Procedures Concerning Discrimination and/or Harassment

FRCC does not permit discrimination or harassment in our work environment, educational programs and activities. FRCC can respond to discrimination and/or harassment only if it is aware of the allegations made. Further, FRCC can more effectively investigate the sooner the allegation is brought to its attention. Any employee or student who believes they have been subjected to discrimination and/or harassment based on federal or state civil rights laws should follow this procedure to report these concerns.

Reporting an Incident of Discrimination and/or Harassment

Employee's Obligation to Report

FRCC employees have an ethical obligation to report any incidences they are aware of concerning discrimination and/or harassment. If the employee is unsure, s/he may direct their questions to Human Resources at the college. Failure to report will be considered a violation of BP 3-70, Colorado Community College System Code of Ethics, and may result in discipline, up to and including termination.

To Report a Complaint Confidentially

If one desires that details of the incident be kept confidential, they should speak with on-campus mental health counselors or off-campus rape crisis resources who can maintain confidentiality. On-campus mental health counselors are available to help you free of charge, and can be seen on emergency basis. In addition, you may speak off-campus with members of the clergy and chaplains, who will also keep reports made to them confidential. There are additional resources available here. If you want to file a confidential complaint to be investigated, you can follow this link to do so. No names are required to complete this form.

Reporting a Complaint

In order to take appropriate corrective action, FRCC must be aware of discrimination, harassment and related retaliation that occurs in FRCC employment and educational programs or activities. Therefore, anyone who believes s/he has experienced or witnessed discrimination, harassment or related retaliation should promptly report such behavior to the Title IX/EO Coordinator by clicking here.

Clery Act-Federal Statistical Reporting Obligations

Certain campus officials have a duty to report criminal misconduct for federal statistical reporting purposes (Clery Act). All personally identifiable information is kept confidential, but statistical information must be passed along to campus law enforcement regarding the type of incident and its general location (on or off-campus, in the surrounding area, but no addresses are given) for publication in the annual Campus Security Report. This report helps to provide the community with a clear picture of the extent and nature of campus crime, to ensure greater community safety. Mandated federal reporters include: student affairs/student conduct officers, campus law enforcement, local police, student activities staff, human resources staff, advisors to student organizations and any other official with significant responsibility for student and campus activities. The information to be shared includes the date, the location of the incident (using Clery location categories) and the Clery crime category. This reporting protects the identity of the victim and may be done anonymously.

Clery Act-Federal Timely Warning Reporting Obligations

Victims of criminal misconduct should also be aware that college administrators must issue immediate warnings for incidents reported to them that are confirmed to pose a serious or continuing threat to students and employees. The college will make every effort to ensure that a victim's name and other identifying information is not disclosed, while still providing enough information for community members to make safety decisions in light of the danger. The reporters for timely warning

purposes are the same as detailed at the end of the above section.

For more information on Clery Act reporting requirements please contact Gordon Goldsmith, Director of Campus Security and Preparedness, 303-404-5799.

Filing a Complaint

All complaints shall be made as promptly as possible after the occurrence. A delay in reporting may be reasonable under some circumstances; however, an unreasonable delay in reporting is an appropriate consideration in evaluating the merits of a complaint or report - [click here](#).

Who to Report to

Report all concerns or complaints relating to discrimination, harassment, or sexual misconduct to: Paul M. Meese, Executive Director, Organizational Development & Human Resources, Title IX/EO Coordinator, 2190 Miller Drive, Longmont, CO 80501, 303-678-3707. To report anonymously please go to: <https://publicdocs.maxient.com/incidentreport.php?FrontRangeCC>

Employees who wish to report a concern or complaint relating to discrimination or harassment by/towards a student may do so by reporting the concern to the Title IX Coordinator(s).

Students with complaints of this nature also have the right to file a formal complaint with the United States Department Education:

Office for Civil Rights (OCR)
U.S. Department of Education
Cesar E. Chavez Memorial Building
1244 Speer Boulevard, Suite 310
Denver, CO 80204-3582
Telephone: (303) 844-5695
Facsimile: (303) 844-4303
Email: OCR.Denver@ed.gov
Web: <http://www.ed.gov/ocr>

For employees with complaints of this nature also have the right to file a formal complaint with the Colorado Department of Regulatory Agencies

Colorado Civil Rights Division
1560 Broadway #1050
Denver, CO 80202
Telephone: (303) 894-2997
Facsimile: (303) 894-7830
Web: <http://www.dora.state.co.us/civil-rights/index.htm>

Or

United States Equal Employment Opportunity Commission
303 E. 17th Avenue
Suite 410
Denver, CO 80203
Telephone: (800) 669-4000

Facsimile: (303) 866-1085

Web: <http://www.eeoc.gov/field/denver/index.cfm>

All other grievances where the complainant is a student(s) and the basis of the complaint is not discrimination and/or harassment based on federal or state civil rights laws will be addressed pursuant to SP 4-31: <https://www.cccs.edu/wp-content/uploads/2012/08/SP4-31Rev07112013.pdf>

All other grievances by an employee(s) and the basis of the complaint is not discrimination and/or harassment based on federal or state civil rights laws will be addressed pursuant to SP 3-50a. <https://www.cccs.edu/wp-content/uploads/2013/09/SP-3-50a.pdf>

The Complaint

Notice of a formal complaint can be made in person or orally to the Title IX or the EO Coordinator(s), but the college strongly encourages submission of grievances involving employee and students to be in writing, or by going to <https://publicdocs.maxient.com/incidentreport.php?FrontRangeCC>

The grievance should clearly and concisely describe the alleged incident(s), when and where it occurred, and the desired remedy sought. The grievance should be signed by the initiator or, in the case of an email submission, sent as an email attachment, in letter format and should contain the name and all contact information for the grievant. To report anonymously please go to:

<https://publicdocs.maxient.com/incidentreport.php?FrontRangeCC>. Any supporting documentation and evidence should be referenced within the body of the formal grievance.

The complainant's supporting documentation should clearly demonstrate all informal efforts, if any, to resolve the issue(s) with the person involved and the person's supervisor. This includes names, dates and times of attempted or actual contact along with a description of the discussion and the manner of communication made in the course of each effort. If contacting the person involved and/or the supervisor is impracticable, the complainant should state the reasons why.

Preliminary Steps

This complaint process involves an immediate initial investigation to determine if there is sufficient evidence to believe a violation has occurred. If so, the college will initiate a prompt, thorough and impartial investigation. This investigation is designed to provide a fair and reliable determination about whether policies or procedures have been violated. If so, FRCC will implement a prompt and effective remedy designed to end the discrimination, prevent its recurrence and address its effects.

Timeline of Process (Informal and Formal)

FRCC shall make every effort to complete the informal process no later than 30 days from the date of notice of complaint.

If the complainant chooses to file a formal complaint, or the informal process was unsuccessful, FRCC shall make every effort to complete the investigation and implement remedies, if any, no later than 60 days from the date the complaint is filed or informal resolution is concluded.

If the college cannot resolve the formal complaint within these timeframes, the college may extend the deadline when necessary to properly investigate the complaint.

Formal and Informal Grievance Procedure for Student and Employee Complaints

The FRCC community benefits from informal and formal procedures that encourage prompt resolution of complaints and concerns that employee and students may have about the implementation of policies and procedures that govern the institution.

Informal Grievance Process

Before pursuing the formal complaint process, every reasonable effort should be made to constructively resolve issues with FRCC employees and students at the informal level. Whenever possible and safe, the problem or complaint should first be discussed with the individual involved in the complaint. If satisfactory resolution is not reached after discussion with the individual, the employee or student should contact the individual's direct supervisor to attempt to resolve the complaint. If these efforts are unsuccessful, the formal complaint process may be initiated. The college does not require an employee or student to contact the person involved or that person's supervisor if doing so is impracticable, or if the employee or student believes that the conduct cannot be effectively addressed through informal means.

If the incident involves an alleged sexual assault, the college will not enter into the informal process.

Formal Grievance Process

If the informal grievance process is unsuccessful, or if FRCC or the complainant chooses not to pursue the informal process, upon receipt of the grievance the Title IX/EO Coordinator(s) will open a formal case, file and assign an investigator(s) who will direct the investigation, confer with the Title IX Coordinator/EO Coordinator(s) on interim action, accommodations for the alleged victim, and take any other necessary remedial short-term actions.

The college has the right to assign more than one investigator per incident.

The investigator(s) will then take the following steps:

- In coordination with the Title IX/EO Coordinator(s), initiate any necessary remedial actions;
- Determine the identity and contact information of the complainant(s) (whether that be the initiator, the alleged victim, or a college proxy or representative);
- Identify the policies and procedures allegedly violated;
- Conduct an immediate initial investigation to determine if there is sufficient evidence to charge the respondent(s), and what policy and procedure violations should be alleged as part of the complaint;
 - If there is insufficient evidence to support the complaint, the grievance should be closed with no further action;
- Meet with the complainant to finalize the complaint and
- Prepare the notice of charges on the basis of the initial investigation;

- Commence a thorough, reliable and impartial investigation by developing a strategic investigation plan, including a witness list, evidence list, intended timeframe, and order of interviews for all witnesses and the accused individual, who may be given notice prior to or at the time of the interview;
- Complete the investigation promptly, and without unreasonable deviation from the intended timeline;
- Make a finding, based on a preponderance of the evidence (whether a policy violation is more likely than not);
- Present the findings to the respondent, who may accept the findings, accept the findings in part and reject them in part, or may reject all findings;
- Share the findings and update the complainant on the status of the investigation and the outcome.

Elaboration on Employee and Student Participation in the Grievance Process

The investigator(s) will contact or request a meeting with the complainant(s), the alleged victim (if different people), and the respondent(s). The investigator(s) may also contact or request a meeting with relevant college staff, students, or others as part of the investigation. The complainant(s) and respondent(s) may offer any documentation, witnesses, or other materials in support of the complaint.

The complainant(s) and the respondent(s) have the option to have an advocate during a meeting with the case officer to discuss the documentation submitted in support of the grievance; however, the complainant(s) or respondent(s) cannot be represented by an attorney or law student (legal counsel) unless civil or criminal actions concerning the particular incident in question are pending. Under those limited exceptions, an attorney or law student may be present but his or her role shall be advisory only. The party represented by legal counsel must notify the investigator(s) forty-eight (48) hours in advance of any scheduled meeting so that the investigator(s) can notify the other party. These procedures are entirely administrative in nature and are not considered legal proceedings.

The complainant(s) and respondent(s) must advise the investigator(s) of the identity of an advocate or witness at least two (2) business days before the date of the meeting with the investigator(s).

No audio or video recording of any kind other than as required by institutional procedure is permitted.

At the investigator's discretion, the investigator(s) may remove anyone who is causing a disruption to the meeting or is being uncooperative.

All these same opportunities and privileges extend to all parties to the complaint.

Findings

Investigator shall issue the findings in the form of an investigation report. Both parties shall be informed of the findings.

Where the respondent accepts the finding that s/he violated the non-discrimination, anti-harassment, or retaliation policy, the CSSO will then proceed with disciplinary action, after

consultation with the Title IX/EO Coordinator(s), in accordance with the applicable policies and procedures that govern.

In the event that the complainant or respondent rejects the findings in part or entirely, the Title IX Compliance Officer will then convene a hearing to determine whether the accused individual is in violation of the contested aspects of the complaint. Both parties shall be notified of the hearing. At the hearing, the findings of the investigation will be admitted, but are not binding on the decider(s) of fact. The investigator(s) may give evidence. The complainant and the respondent have the opportunity to be present and to participate in the hearing. The hearing will determine whether it is more likely than not that the respondent violated the policies forming the basis of the charge. The goal of the hearing is to provide an equitable resolution via an equitable process, respecting the civil and legal rights of all participants.

The hearing panel or person shall issue a decision. Both the complainant and the respondent shall be notified in writing of the decision.

- If the respondent is found not in violation, the investigation shall be closed.
- If the respondent is found in violation, the decision will be given to the CSSO to proceed with disciplinary proceedings in accordance with the student disciplinary policy and procedure.
 - For students, disciplinary action will be in compliance with:
 - BP 4-30, Student Discipline: <https://www.cccs.edu/wp-content/uploads/2012/08/BP4-30.pdf>
 - SP4-30, Student Disciplinary Procedure: <https://www.cccs.edu/wp-content/uploads/2013/09/SP4-30.pdf>

The college will act to end the discrimination, prevent its recurrence, and remedy its effects on the victim and the college community.

Filing an Appeal Request

In the event that a respondent accepts the findings of the investigation, those findings cannot be appealed during the student discipline process. Sanctions imposed by the Title IX Compliance Officer post-investigation can be appealed pursuant to the student discipline procedure.

All sanctions imposed by the original decision maker will be in effect during the appeal. A request may be made to the CSSO for special consideration in exigent circumstances, but the presumptive stance of the institution is that the sanctions will stand. Graduation, study abroad, internships/externships, etc. do not in and of themselves constitute exigent circumstances, and students may not be able to participate in those activities during their appeal. In cases where the appeal results in reinstatement to the institution or of privileges, all reasonable attempts will be made to restore the employee, student, authorized volunteer, guest or visitor to their prior status, recognizing that some opportunities lost may be irretrievable in the short term.

Special Grievance Process Provisions

Attempted violations. In most circumstances, college will treat attempts to commit discrimination, harassment, or retaliation as if those attempts had been completed.

College as Complainant. As necessary, college reserves the right to initiate a complaint, to serve as complainant, and to initiate conduct proceedings without a formal complaint by the victim of misconduct.

Standard of proof -the college will use the preponderance of evidence standard in the civil rights investigation proceedings, meaning, the college will determine whether it is more likely than not a violation occurred.

Jurisdiction -College grievance proceedings may be instituted over incidences that occur or are related to College or college-sanctioned activities or was of such a nature to impact upon the college.

False Reports. College will not tolerate intentional false reporting of incidents. False reporting could lead to disciplinary action, up to and including termination for employees, and expulsion for students.

For FRCC employees, false reports will be considered a violation of BP 3-70, Code of Ethics.

For students, false reports will be considered a violation of the college student code of conduct.

False reporting may also be a violation of state criminal statutes and civil defamation laws.

The Parties do not have the right to be represented by legal counsel during these proceedings except in the case where civil or criminal actions concerning the grievance are pending and in that case the legal counsel's role shall be advisory only. The party represented by legal counsel must notify the investigator(s) forty-eight (48) hours in advance of any scheduled meeting so that the investigator(s) can notify the other party.

Immunity for Victims and Witnesses that are Students. FRCC encourages the reporting of violations and crimes by victims and witnesses. Sometimes, victims or witnesses are hesitant to report to FRCC officials or participate in grievance processes because they fear that they themselves may be accused of policy and procedure violations, such as underage drinking at the time of the incident. It is in the best interests of this community that as many victims as possible choose to report to college officials, and that witnesses come forward to share what they know. To encourage reporting, FRCC pursues a policy of offering victims of crimes and witnesses limited immunity from policy violations related to the incident. This is not immunity from criminal prosecution.

Bystander Engagement for Students. The welfare of students in our community is of paramount importance. At times, students on and off-campus may need assistance. FRCC encourages students to offer help and assistance to others in need. Sometimes, students are hesitant to offer assistance to others, for fear that they may get themselves in trouble (for example, as student who has been drinking underage might hesitate to help take a sexual misconduct victim to the Campus Police or Security). The college pursues a policy of limited immunity for students who offer help to others in need. This is not immunity from criminal prosecution. While policy and procedure violations cannot be overlooked, the college will provide educational

options, rather than punishment, to those who offer their assistance to others in need.

Parental Notification when Students are involved in an incident. The college reserves the right to notify parents/guardians of dependent students regarding any health or safety risk, change in student status or conduct situation, particularly alcohol and other drug violations. The college may also notify parents/guardians of non-dependent students who are under age 21 of alcohol and/or drug policy violations. Where a student is not-dependent, college will contact parents/guardians to inform them of situations in which there is a significant and articulable health and/or safety risk. The college also reserves the right to designate which college officials have a need to know about individual conduct complaints pursuant to the Family Educational Rights and Privacy Act.

Notification of Outcomes. Complainant(s) and Respondent(s) have an absolute right to be informed of the outcome, essential findings, the sanctions imposed if any, unless the college has a legitimate concern for the health, safety, or welfare of the college.

The outcome of a campus investigation is part of the educational record of the accused student, and is protected from release under a federal law, FERPA. However, FRCC observes the legal exceptions as follows:

- Specifically, Complainant(s) in non-consensual sexual contact/intercourse, sexual exploitation, sexual harassment, stalking, and relationship violence incidents have an absolute right to be informed of the outcome, essential findings, and sanctions of the hearing, in writing, without condition or limitation.

- The college may release publicly the name, nature of the violation and the sanction for any student who is found in violation of a college policy that is a "crime of violence," including: arson, burglary, robbery, criminal homicide, sex offenses, assault, destruction/damage/vandalism of property and kidnapping/abduction. The college will release this information to the complainant in any of these offenses regardless of the outcome.

Alternative Testimony Options for Employees and Students. For sexual misconduct complaints, and other complaints of a sensitive nature, whether the alleged victim is serving as the complainant or as a witness, alternative testimony options will be given, such as placing a privacy screen in the hearing room, or allowing the alleged victim to testify outside the physical presence of the accused individual, such as by Skype. While these options are intended to help make the alleged victim more comfortable, they are not intended to work to the disadvantage of the accused student.

Past Sexual History/Character of Employees and Students. The past sexual history or sexual character of a party will not be admissible by the other party in the investigation or hearing unless such information is determined to be highly relevant by the investigator. All such information sought to be admitted will be presumed irrelevant, and any request to overcome this presumption by the parties must be included in the complaint/response or a subsequent written request, and must be reviewed in advance of the hearing by the CSSO. While previous conduct violations by the accused student are not generally admissible as information about the present alleged

violation, the CSSO may supply previous complaint information to the investigators, the conduct board, or may consider it him/herself if s/he is hearing the complaint, only if:

1. The accused was previously found to be responsible;
2. The previous incident was substantially similar to the present allegation;
3. Information indicates a pattern of behavior and substantial conformity with that pattern by the accused student.

Retaliatory Acts

If any person who reports an incident of discrimination and/or harassment, or any person who testifies, assists or participates in a proceeding, investigation or hearing relating to such allegation of discrimination and/or harassment, feels they are being subjected to retaliatory acts may report such incidences to the Title IX Coordinator.

It is a violation of this procedure to engage in retaliatory acts against any person who reports an incident of discrimination and/or harassment, or any person who testifies, assists or participates in a proceeding, investigation or hearing relating to such allegation of discrimination and/or harassment. Such act will be subject to discipline, up to and including expulsion for students, termination for FRCC employees, and dismissal for authorized volunteers, guests or visitors.

Revising this Procedure

This procedure defines and prohibits harassment on the basis of federal and state law as interpreted by the courts. If statutory provisions, regulatory guidance, or court interpretations change or conflict with this policy, the college's procedure can be deemed amended as of the time of the decision, ruling or legislative enactment to assure continued compliance.

CCCS reserves the right to change any provision or requirement of this procedure at any time and the change shall become effective immediately.

Persons Convicted of Rioting Offenses

Under Colorado law, no person shall be enrolled in a state supported institution of higher education for a period of twelve months following the date of a guilty verdict, guilty plea, no contest plea, or a deferred judgment and sentence for inciting riot, arming rioters, or engaging in a riot.

Policy on Exclusionary Orders

FRCC, acting through its President, any Vice President, or Director of Campus Security and Preparedness ("College Representatives") hereby reserves the right to exclude any person not authorized to engage in work, study, or other activities ("Unauthorized Persons") from all or any part of its campuses or facilities to the extent that such person's conduct: (i) materially disrupts, or presents a significant threat of material disruption to FRCC's academic mission; or (ii) constitutes a substantial threat to the safety and well-being of persons lawfully present on any such campuses or in any such facilities. Such reserved right shall be in addition to all rights of FRCC's to exclude persons in connection with the imposition of internal discipline. Additional information can be obtained from the Department of Campus Security and Preparedness.

Sexual Harassment

Title IX of the Education Amendments of 1972 prohibits sex discrimination in educational programs. FRCC, by virtue of its commitment to the ideals of dignity, equality, and mutual respect for all people, deplors, and condemns any form of sexual harassment. It is the intent of FRCC to comply with both the letter and the spirit of Title IX to make certain discrimination does not occur or adversely affect the educational environment. FRCC has a legitimate and compelling interest in prohibiting sexual harassment. Further, FRCC has an obligation to discipline those who do engage in sexually harassing behavior.

Sexual harassment in the educational environment may occur among students, administrators, faculty, staff, visitors, or other persons on campus or at college-related activities. The range of unwelcome, unwanted, and inappropriate behaviors may include, but are not limited to:

- An attempt to coerce an unwilling person into a sexual relationship.
- To repeatedly subject a person to egregious, unwelcome sexual attention.
- To punish a refusal to comply with a sexual based request.
- To condition a benefit on submitting to sexual advances.
- Sexual violence which is defined as threatening or causing physical harm, extreme verbal abuse, or other conduct which threatens or endangers the health or safety of any person.
- Violence between those in an intimate relationship.
- Stalking that is gender-based which is defined as repetitive and/or menacing pursuit, following, harassment and/or interference with the peace and/or safety of a member of the community; or the safety of any of the immediate family of members of the community.
- Gender-based bullying which is defined as repeated and/or severe aggressive behavior likely to intimidate or intentionally hurt, control or diminish another person, physically or mentally (excluding speech or conduct otherwise protected by the 1st Amendment).
- Gender expression/stereotyping which is defined as simplistic generalizations about gender attributes, differences, and roles of individuals and/or groups. Stereotypes rarely communicate accurate information about others. When people automatically apply gender assumptions to others regardless of evidence to the contrary, they are perpetuating gender stereotyping.
- Hazing which is defined as acts likely to cause physical or psychological harm or social ostracism to any person within the college community on the basis of gender, when related to the admission, initiation, pledging, joining, or any other group-affiliation activity.
- Discrimination which is defined as actions that deprive other members of the community of educational or employment access, benefits or opportunities on the basis of gender.
- Intimidation that is gender-based which is defined as implied threats or acts that cause a reasonable fear of harm in another.

Sexual harassment will not be tolerated at FRCC because it creates an unacceptable educational environment. Some situations may be resolved informally. Students who feel that they have been subjected to sexual harassment by other students should contact the Dean of Student Services or Human Resources at the Boulder County, Larimer, or Westminster Campuses. Complaints against FRCC employees should be filed with the Human Resources Office. Please see the Student Tab/General Information Channel of eWOLF for the current Student Sexual Harassment Complaint Procedure documents or go to <https://publicdocs.maxient.com/incidentreport.php?FrontRangeCC>.

The College prohibits and will not tolerate discrimination or harassment that violates federal, state law, or Board Policy 3-120 or Board Policy 4-120. The College does not discriminate on the basis of gender, sex, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity or sexual orientation. The College complies with Titles VI and VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Education Amendments of 1972 (Title IX), the Age Discrimination in Employment Act, the Rehabilitation Act of 1973, the Americans with Disabilities Act Amendments Act (2008), Pregnancy Discrimination Act of 1978, Vietnam Era Veterans Readjustment Assistance Act of 1974; Executive Order 11246, and sections 24-34-301, C.R.S. et seq. **For the proper procedures regarding sexual misconduct, please refer to the System President's Procedures SP 3-120a and SP 4-120a, or contact Paul Meese, Executive Director for further information at 303-678-3707.**

Storm Water Notice

Front Range Community College cares about our campus storm water. The college has a Non-Standard MS4 Storm Water Permit through the Colorado Department of Public Health and Environment and has an active storm water management program. For more information on the storm water management program and how you can help us keep our campus storm water clean, please visit or call our Larimer Campus Facilities Services Department at 970-204-8255 or Westminster Campus Facilities Services Department at 303-404-5400.

Voter Registration Information

Front Range Community College supports the National Voter Registration Act by providing students access to voter registration information. The State of Colorado - Voter Registration Application Form is available at www.elections.colorado.gov or at the local County Clerk and Recorder's office. Students with disabilities can access the Voter Registration Application in the office of Disability Support Services.

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