Welcome to Front Range Community College

At FRCC, we believe that learning is a partnership among students, faculty, and staff. Our role – and the guiding principle of our institution – is to help you achieve success. Here are just a few things you might like to know about our college:

We prepare you for the "real world."

Our associate degrees and certificate programs train students for careers in well-established and emerging industries. Our Clean Energy Technology Program, for example, is the result of collaboration with more than two dozen Colorado businesses and organizations to design a curriculum that will provide students a solid foundation in alternative and renewable energy technology and help meet the challenges of area businesses.

For employers, FRCC's Corporate Solutions team customizes training programs to meet the specific needs of businesses, whether they want to host industry-specific training on-site, provide business education for executives (such as project management or Six Sigma certification training), or establish programs to develop employees' management and leadership skills.

Your credits are guaranteed to transfer.

Our gtPATHWAYS curriculum of general education courses is guaranteed to transfer to the colleges of arts and sciences at all public four-year colleges and universities in Colorado. FRCC is the number one transfer institution for Colorado State University, Metropolitan State College of Denver, and the University of Colorado at Boulder, and we also have transfer agreements with Colorado School of Mines, Regis University, and the University of Denver. In addition, there are several special statewide transfer agreements in place for courses of study such as business, early childhood education, elementary education, and nursing.   If you do transfer, our studies show that you will be very well prepared – FRCC students do as well at four years schools as the students who start there.

Our faculty are dedicated to teaching and learning.

Our devoted, highly educated faculty is 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 programs 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, Post-Secondary Enrollment Options (PSEO), Concurrent Enrollment, and FRCC Early College programs, which allow students to simultaneously earn high school and college credit, are just a few examples of FRCC's commitment to helping young students better their lives through education.   Thanks to the Colorado Concurrent Enrollment Act and ASCENT (Accelerating Students through Concurrent ENrollmenT) legislation, there are now more opportunities for high school students to take classes toward a certificate or associates degree while finishing high school.

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 on our campuses.

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, we offer mathematics and English preparatory courses that will set you up to succeed. We also provide tutoring, math, and science drop-in help centers, and a number of other academic 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're here to help you make the most of the experience.

No matter who you are, FRCC has programs and resources that will help you thrive—and have fun while you're at it. Our mentorship programs, tutoring support, study skills seminars, and math, science and English labs enhance your learning. We also believe that not all learning takes place within the walls of the classroom. Check out all the organizations and activities our campuses have to offer—visit with a Student Life professional to see how you can get involved.

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

Important Dates to Remember

Calendar dates are subject to change without notice.

Summer Semester 2010

CLASS SESSIONS

10-Week Classes	June 1–August 9
1st 5-Week Classes	June 1–July 2
2nd 5-Week Classes	July 6-August 9
Weekend Classes	June 4-August 8
INDEPENDENCE DAY HOLIDAY	NO CLASSES July 5 College Closed July 5

Fall Semester 2010

15-Week Classes	August 23-December 13
1st 10-Week Classes	August 23-November 1
2nd 10-Week Classes	September 28-December 13
1st 5-Week Classes	August 23-September 27
2nd 5-Week Classes	September 28-November 1
3rd 5-Week Classes	November 2-December 13
1st 7 1/2 Week Classes	August 23-October 13
2nd 7 1/2 Week Classes	October 14-December 13
1st 12 Week Classes	August 21-November 15
Last 12 Week Classes	September 14-December 13
Weekend Classes	August 21-December 12
LABOR DAY HOLIDAY	September 4-September 6 College Closed September 6
THANKSGIVING HOLIDAY	November 22-28 NO CLASSES College Closed November 25

Spring Semester 2011

15-Week Classes	January 18 - May 9
1st 10-Week Classes	January 18 - April 4
2nd 10-Week Classes	February 22 - May 9
1st 5-Week Classes	January 18 - February 21
2nd 5-Week Classes	February 22 - April 4
3rd 5-Week Classes	April 5 - May 9
Weekend Classes	January 21 - May 8
MARTIN LUTHER KING, JR. HOLIDAY	January 17 NO CLASSES College Open

SPRING BREAK 2011

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

COMMENCEMENT 2011

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

Contents

About FRCC

Campuses

Boulder County Campus
2190 Miller Drive
Longmont, Colorado 80501
303-678-FRCC

Larimer Campus
4616 South Shields
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 Center
1850 Egbert St., Suite 100
Brighton, Colorado 80601
303-404-5099

FRCC Online Learning

www.frontrange.edu
303-404-5513
or 970-204-8250

Credits

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The Office of the Registrar and Publications produces this catalog.

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

Accreditation

The Higher Learning Commission, a commission of the North Central Association of Colleges and Schools, accredits Front Range Community College (FRCC).

The Higher Learning Commission
North Central Association of Colleges and Schools
30 N. LaSalle Street, Suite 2400
Chicago, IL 60602-2504
1-800-621-7440
http://www.ncahigherlearningcommission.org/

Programs Accredited by Special Agencies:

- Automotive Technology: National Automotive Technological Education Foundation, Inc. (NATEF)
- Dental Assisting: Commission on Dental Accreditation, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and by the United States Department of Education
- Dietetic Technology: The Dietetic Technology Program is currently granted accreditation or approval status by the Commission on Accreditation for Dietetics Education of The American Dietetic Association, 216 W. Jackson Blvd., Chicago, IL 60606-6995, (312)899-5400
- Emergency Medical Services: Colorado Department of Public Health and Environment Emergency Medical Services and Prevention Division
- Heating, Air Conditioning and Refrigeration: Partnership for Air Conditioning, Heating and Refrigeration Accreditation (PAHRA)
- 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
- Nursing: Colorado State Board of Nursing and National League for Nursing Accreditation Commission (NLNAC accredited at Larimer Campus, in candidacy at Westminster and Boulder County Campuses)
- 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

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).

Mission

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

Purpose

As an institution of higher education, Front Range Community College serves anyone 17 years of age or older 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 of all ages 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.

Vision

We are learner-centered and responsive to diverse student goals, including service to community.

We facilitate learning where, when, and how it best suits the needs of the diverse learning public we serve.

Our curriculum prepares vocational, academic, and business-oriented students to succeed in a highly competitive, global economy by focusing on quality, innovation, technology, self-initiative, and problem-solving.

Collaboration, teamwork, cheerfulness, diversity and a priority on student success and satisfaction characterize our work and our management.

We recognize that our faculty, together with our staff, is our greatest asset and that our commitment to their continuous professional development is essential.

We are driven to excel and embrace the importance of listening to our constituencies.

Business and civic leaders experience our resolve to impact in significant ways the economic well-being of the region we serve.

We are recognized as a model for a "virtual campus" spanning not only our service areas, but also wherever technology allows us to educate effectively.

Core Values

- **We value students.**
  We value them as people and 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 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.

Chronology: FRCC's Campuses

Fall 1968 — FRCC opens its doors in temporary quarters at Eastt 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. Like the Oakridge Center, its predecessor, the Remington Campus was an auxiliary instructional site for the Larimer 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.

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 23,000 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. English as a Second Language and GED instruction are also offered. Selected FRCC classes are being offered on the CU-Boulder Campus for interested CU students.

Larimer: Located at Shields Street and Harmony Road in the rapidly growing south side of Fort Collins, this former vocational-technical school is now a true college campus, offering 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 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 opened in 1998. An active student government serves the student body, and Student Life offerings include many clubs, publications and other activities. English as a Second Language and GED instruction are also offered.

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 joint-use College Hill Library, shared with the City of Westminster.

Brighton: Located at 1850 Egbert St., the 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

Students are welcome at Front Range Community College, whatever their race, color, age, religion, disability, national origin, gender, sexual orientation, educational background, or educational goal may be.

The following statistics for the fall semester 2008 provide the general makeup of FRCC's student body:
Median Age – 23
Minority – 18.6%
Men – 42.8%
Women – 57.2%

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.

Strategic Plan

Planning for the future is a critical component of the college's operation. This planning is represented in FRCC's strategic plan. The college plan provides a framework that allows for college-wide and campus-based strategic and operational initiatives based upon the following strategic priorities:

1. FRCC creates a welcoming community of learners that embraces excellence by setting and achieving high standards.

2. FRCC promotes student access and success in learning, in work, and in the community by valuing and respecting the diversity of all and the individuality of each.

3. FRCC provides a great place to work by valuing and respecting employees for their unique contributions and potential.

4. FRCC leads community vitality and sustainability by strengthening partnerships and responsiveness.

5. FRCC obtains resources to successfully achieve its mission.

Getting Started

Which Catalog to Use

This catalog is effective beginning Summer Semester 2010 for students who will be enrolling at Front Range Community College for the first time.

Continuing students who have not had a 12 month lapse in enrollment since first enrolling at FRCC can use the catalog that was in effect when they first registered at FRCC or the catalog in effect when they apply for graduation.

Students who have changed majors can use the catalog in effect on the date they made the official major change in the college's computer system or the catalog in effect on the date they apply for graduation.

Other Formats Available

This document is available in alternate formats for persons with disabilities. To request this catalog in an alternate format, contact the Office of Special Services at 303-404-5300.

Application and Enrollment Procedures for New Students

Front Range Community College is an open-door institution and does not require a high school diploma or a specific grade point average (GPA) before enrolling. However, most students must take a placement test to ensure they have the ability to benefit from the level of instruction offered at the community college.

1. Admission

Application for Admission

Prior to enrolling at the college, students must complete and submit an Application for Admission to the Office of Admissions and Records. This form is available on campus, as well as in the *Schedule of Courses* published each semester. An online application is also available at the FRCC website: www.frontrange.edu. For those students who are currently attending a local high school and wish to enroll concurrently at the college, please review the section of this catalog dealing with the Admission of High School Students.

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 stipend recipients.

Declaring a Program of Study

Students should indicate their program of study when completing the Application for Admission.

Each program has a unique curriculum code for computer entry purposes. The program information listed in the catalog indicates this code.

Special Application Procedures

Some programs, such as nursing and allied health programs, have limited space and require special admissions procedures.

Please review program requirements in this catalog or contact the faculty advisor in those areas.

College Transcripts and Awarding of Transfer Credit

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. FRCC may deny admission or continued enrollment to persons who misrepresent their credentials or background. (See Rights Reserved section of this catalog.)

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

Academic Progress Policy

FRCC reserves the right to review the enrollment of students who do not appear to be benefiting from instruction (see Academic Progress Policy). In such cases, the Dean of Student Services reviews students' records with a recommendation made to the College President, who makes the final decision regarding their enrollment.

Physical Examination and Immunization

Physical examinations and specific immunizations are not required for admission to the college. However, a selected instructional program may require specific immunizations that include:

1. Hepatitis B or waiver
2. Diphtheria and tetanus
3. Proof of immunity to rubella

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)

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.

Student Classification

Students are classified by academic year, admission status and residency 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 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 22 (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 either: at least 22 years old, or married, or emancipated. Emancipation requires that the student's parents do not provide financial support of any nature or purpose. Parental support includes funds previously set aside for current support even if those funds are in the student's name. Parents may provide reasonable incidental gifts, but may not provide significant funds in order to be 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 and GED recipients, etc. Please contact the Tuition Classification Officer at Front Range Community College to determine if you may be in an eligible population.

Initial Classification

The initial tuition classification decision is made by the designated Residency Examiner in the Admissions and Records Office for the semester 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 student's status is determined, it remains unchanged in the absence of further action and evidence to the contrary.

Changes in Tuition Classification

Any student who believes his/her tuition classification is not correct or has changed and now wishes to prove he/she is eligible for in-state tuition may petition for in-state tuition or resident classification and should contact the Tuition Classification Officer for assistance.   Petition forms are available online at www.frontrange.edu or at the Admissions and Records Office.   FRCC sets a priority deadline for each semester which is listed in the class schedule and 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 from 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.

Appeal Procedures

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 in writing and provide any additional supporting documentation available to substantiate the claim to in-state tuition classification within 30 days of the denial.   The student will be notified of the decision made by the FRCC Appeals Committee within 30 days.   The decision of the FRCC Appeals Committee is final and will not be overturned by the Department of Higher Education.

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.

Nonresident 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, which at FRCC is the total cost of resident tuition.   WUE students are not eligible for the College Opportunity Fund stipend, but WUE tuition is considerably less than nonresident tuition. Please contact the Admissions and Records Office for a current list of WUE participating states.

HB1023 Verification

HB06S-1023 which was signed into law on July 31, 2006, requires CDHE and institutions of higher education, including FRCC, to verify the lawful presence of all applicants for public postsecondary education benefits. Applicants who fail to meet verification requirements may be subject to nonresident tuition and removal of COF funds and other state funded aid. For more information, please refer to *http://highered.colorado.gov/finance/Residency/requirements.html*.

High School Students Seeking Concurrent Enrollment Options

High school students attending FRCC may earn both college and high school credit for their course(s) and may receive

reimbursement of tuition or have tuition costs paid up front by their school district.   A written agreement must be completed, approved by the school district, and submitted to the college.   It should be noted that school districts might have established early deadlines for applying to participate in this program.

Underage Admissions

FRCC complies with the SBCCOE Policy to admit students who are 17 years of age or older. Students wishing to secure a waiver of the minimum age for admission must meet the following criteria:

1. Qualified students must demonstrate readiness for college level work by meeting all state established cut scores for college level English, reading and mathematics.

2. Students should meet with an advisor or designated staff member to determine eligibility for admission and appropriateness of course selection, review college expectations and complete the acknowledgement form. Completed forms will be forwarded to the Dean of Student Services for final approval.

3. A responsible parent or guardian must sign the acknowledgement form indicating that the parent has been advised regarding the expectations of the college.

4. High school students enrolled under Concurrent Enrollment or in the Gateway to College program who are 16 by the start of classes may be eligible for an automatic waiver because of their enrollment in those programs. See program staff for additional details.

International Students

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

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

1. Submit a completed Application for Admission and Supplemental Information Form.

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 at least 475 on the paper/pencil exam, or 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 4.5. or higher, or

    c. Other approved exceptions

4. Submit a statement of the student's or the sponsor's financial resources in United States currency. The statement must show minimum funds of US $20,000 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 at time of registration. 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:

- Summer Semester – May 1

- Fall Semester – August 1

- Spring Semester – December 1

After materials are reviewed, 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 and students are responsible for finding their own housing.

After being admitted, international students must complete the following in order to enroll in courses:

1. Present proof of current and adequate medical insurance one week prior to the start of classes or the student will be dropped from all courses and SEVIS will be notified. The college has provisions to insure international students under a comprehensive plan. Information may be obtained from the International Student Admissions Officers. If international students do not have comparable medical coverage, they are required to purchase the FRCC medical and health insurance policy.

2. Complete assessment testing for placement into courses. This assessment may be taken 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.

2. Assessment for Placement

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 Accuplacer assesses 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 (Write Placer) 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. However, if the minimum scores are not achieved, this does not affect the student's admission to the college.

The assessment scores required for placement in specific courses are available in the campus advising centers and testing centers as well as on the college website.

Students intending to enroll in BIO 201 or BIO 204 are required to first complete the prerequisite course, BIO 111, with a grade

of "C" or better or pass the Science Placement Assessment.

In addition, students intending to enroll in CHE 111 are required to first complete the prerequisite course, CHE 101, with a grade of "C" or better or pass the Chemistry Placement Assessment. The prerequisite course must be completed no more than seven years prior to enrolling in CHE 111.

Accommodations

Reasonable accommodations will be provided upon request for persons with documented disabilities. If you require special 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 may be available on campus. Contact the advising www.frontrange.edu/advising or testing centers www.frontrange.edu/testing for further information.

Study Guides

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 (college-wide).

Assessment Exemptions

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

1. Possess an Associate of Arts or 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 an English composition and/or mathematics course 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.

ACT TEST	SCORE	SAT TEST	SCORE
ACT English	18	SAT English	440
ACT Reading	17	SAT English	430 (exempt from reading only)
ACT Math	19*	SAT Math	460

Note: ACT placement for math is changed as of Summer 2008. For math placement chart, go to www.frontrange.edu/testing.

4. Enrollment in only one course for either employment enhancement or personal interest.

   Note:

   a. Students under 20 years of age are not eligible for the one course waiver. CDHE requires that all 17, 18 and 19 year old students 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.

5. Enrollment in selected programs of one term or less.

   Note: The only program that is eligible for the waiver is the EMT-Basic certificate for non-degree seeking students.

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.

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.

3. Academic Advising

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.

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. Advising is also available via email:

CAMPUS	EMAIL ADDRESS
Boulder County Campus	bcadvising@frontrange.edu
Larimer Campus	lc.advising@frontrange.edu
Westminster Campus	wcadvising@frontrange.edu
Brighton Center	wcadvising@frontrange.edu

4. Choosing or Changing Program of Study

Degree and certificate programs are identified as specific programs of study. A student declares a program of study when first enrolling and should verify the program by checking their online student account each semester. Students should consult this catalog to determine available programs of study. For those students who are undecided, please contact an advisor. Changing a declared program of study may result in a change in degree/certificate requirements (see General Requirements for Degrees and Certificates).

5. Password

When meeting with a counselor or an advisor, students obtain a password for use in online registration, obtaining grades and

accessing student records. The student password is not provided over the phone or via email.

6. Registration

Registration instructions and schedules are published at www.frontrange.edu for each semester, or may be obtained from the Information Centers or Admissions and Records Office on each campus.

Students may register for courses, add/drop, withdraw from courses, make payment and obtain grades through their student accounts which may be accessed at the login area on the FRCC website at www.frontrange.edu. Additionally, students may change their address or password, print unofficial transcripts, request an official transcript, and check their financial aid. To access their eWOLF accounts, students obtain an initial password from an advisor.

Course Waitlist

When a course is full, a waitlist is created to fill open spaces that may occur. The waitlist allows students an opportunity to get into a course that is full but could have space available before the course begins. The waitlist will record the time and date that the student placed his/her name on the waitlist and will register students for open spaces in that order. Students will be notified of enrollment by telephone or e-mail. It is critical for students to keep contact information (address, phone and e-mail address) current at the Admissions and Records Office. Students are responsible for dropping those courses in which they do not want to remain enrolled by the course drop deadline, or they will be held financially responsible for course tuition and fees. Students may waitlist online at www.frontrange.edu through their eWOLF account. For courses that students are not currently enrolled in, students may waitlist for only one section at a time. For example, students may not register for a course and waitlist for a different section of the same course. Students who waitlist for more than one section of the same course and/or create a time conflict will be dropped from the course waitlist by the Admissions and Records Office. The waitlist for 15-week courses (or 10-week courses in the summer) will be terminated at the end of the second business day of the semester. Once the waitlist is terminated, the Admissions and Records Office will no longer register students into open spaces. Please contact the Admissions and Records Office for further information. Waitlist is not available for online courses.

Financial Matters

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

Tuition and fee rates presented are the actual rates for FY 2009-2010. At the time of printing, FY 2010-2011 rates were not available. Please check back with the college for updated rates.

IMPORTANT INFORMATION FOR RESIDENT STUDENTS: SIGN UP FOR THE COLLEGE OPPORTUNITY FUND. The total cost of a student's education, called tuition, includes the state's portion of tuition and the student's portion of tuition. While the state has always paid a portion of a resident student's cost of education, beginning fall semester 2005, it is no longer automatic. Resident students must sign up for the College Opportunity Fund (COF) and authorize its use or pay the total cost of education, including the state and student's portion of tuition. Students must sign up once to create a lifetime account--and then authorize the state initially to pay the student's portion each semester in the form of a COF stipend. There is a lifetime credit limit of 145 undergraduate credit hours although some waivers may apply. For more information, go to the FRCC website at www.frontrange.edu and click on the COF button. You can also sign up for COF or check your COF account at www.CollegeInColorado.org.

Registration Fee***

A refundable registration fee of $11.45 is charged each semester, regardless of the number of courses taken, or whether a student drops any or all courses.

Course Fees**

To defray the cost of consumable materials and supplies, some courses are assessed a course fee of $6.05 per credit hour. These fees are listed with relevant courses in the Course Schedule located at www.frontrange.edu.

Pass Through Fees**

Certain courses and/or programs require services performed by outside parties. One example is malpractice insurance. These fees are listed with relevant courses in the Course Schedule located at www.frontrange.edu.

Student Center / Campus Center Bond Fee**

To fund the bond that constructed new student center facilities, Westminster Campus students pay a $30.00 Campus Center fee each semester. Larimer Campus students pay $5.00 per credit hour, up to a maximum of $60.00.

Student, Parking and Facility Fees**

Student fees are $4.70 per credit hour and support the operation of various Student Life services and the maintenance of parking services on each FRCC campus; student fees are subject to change. Student Life services include all student publications such as the *Boulder County Sun* (journalism class project), *The Front Page* (the recognized student newspapers/newsletters), and *The Rangeview* (a student news publication at the Larimer Campus); the official Student Handbook; and the programs and activities that supplement learning experiences at the college. Fees also assure that, via a variety of recognized student organizations and clubs, students have an official voice in matters of college life.

Westminster Campus students pay a parking lot fee of $3.00 per credit hour, up to a maximum of $36.00.

Boulder County Campus students pay $2.60 per credit hour up to 12 credit hours for a facility fee.

Estimated Per Credit Hour Tuition Rates for FY 2009-10*

Tuition and fees rates presented are the actual rates for FY 2009-2010. *At the time of printing,

FY 2010-2011 were not available. Please check back with the College for updated rates:

Tuition	Total Tuition	COF Stipend*	Student Share of Tuition	Registration Fees***	Other Fees**	Total Cost of Attendance
Resident	$156.30	$68.00	$88.30	$11.45	Fees vary by program and campus	$167.75
Non-Resident	$393.90		$393.90	$11.45		$405.35
Resident – CCCOnline	$224.10	$68.00	$156.10	$11.45		$235.55
Non-Resident – CCCOnline	$246.95		$246.95	$11.45		$258.40
Resident – FRCC Online	$224.10	$68.00	$156.10	$11.45		$235.55
Non-Resident – FRCC Online	$246.95		$246.95	$11.45		$258.40
Resident – Nursing	$196.65	$68.00	$128.65	$11.45		$208.10

* COF Stipend

The State of Colorado historically subsidized higher education for in-state students by giving money directly to the colleges. In 2004 the Colorado Legislature enacted a new law establishing the College Opportunity Fund (COF). Under this new law, starting in the Fall semester 2005, the State gives this money for the subsidy to students by sending it to the institution the student designates. This money, known as College Opportunity Fund stipend, is applied to an in-state student's tuition if the student applies for and authorizes the use of the stipend. The college the student attends receives the money and it will appear as a credit on the student's tuition bill. Currently the College Opportunity Fund (COF) stipend is estimated to be worth $68.00 per credit hour.

ESTIMATED BASE TUITION CALCULATION

Total estimated base in-state tuition	$156.30
Minus estimated "College Opportunity Fund Stipend"	$68.00
Student's estimated share of in-state tuition	$88.30

*For explanation of asterisks (** and ***) in chart, please see headings with asterisks above.*

Tuition and Fee Payment

Students are properly enrolled when they have made payment, financial aid is verified, or an authorized third party plan is accepted by the Cashier's Office.

Deferred Payment

The college utilizes FACTS, an independent firm, to administer and manage its deferred payment plan. All deferred payments arrangements are made online. To sign up, simply go to www.frontrange.edu/cashiers.

You need to know:

- 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 a student loan, 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 again until payment is made.

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 bad check fee. A hold will be placed on the students grades, transcripts 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 students grades, transcripts 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 grades, transcripts, 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, credit card charge back fees, and resulting collection charges. A hold will be placed on your grades, transcripts, and future registration.

Delinquent Accounts

In accordance with state policy, all delinquent student obligations, including those from improper withdrawal/drop procedures and the loss of previously awarded financial aid, are referred to the state's central collections service.

Nonattendance

To end enrollment in one or more courses, students must drop or withdraw from the course. Students may do this online through their student account or by submitting the appropriate drop or withdrawal form to the Office of Admissions and Records by the published deadline. Nonattendance does not constitute a drop or withdrawal.

Dropping or withdrawing from courses may affect a student's financial aid status. Contact the Financial Aid Office for policy information.

Tuition and Fee Refunds

Students must request a refund if a course is dropped by completing a tuition adjustment form or contacting the Cashier's Office. Due to Payment Card Industry (PCI) restrictions, all refunds can only be issued in the form of a **check issued to the student**. After the census for 15 week courses, all refunds will be issued within 21 days of the request.

Refunds for Dropped Courses

One hundred percent of tuition and fees (except the deferred payment fee) is refunded if a student drops all courses before the end of the add/drop period. The add/drop period usually extends through the 12th day of instruction for fall or spring semesters, or through 15 percent of the instructional days for terms or classes less than 15 weeks long. No tuition and fee refunds are granted after the add/drop period. Information about repayment of Title IV funds and refunds is available from the Financial Aid Office.

Refunds for Canceled Classes

One hundred percent of tuition and fees (except the deferred payment fee) is refunded for any class canceled by the college. However, students are responsible for initiating the refund process by completing a Schedule Adjustment Form (Add/Drop) and contacting the Cashier's Office or completing a Tuition Adjustment Form. All refunds will be issued within 21 days of their request starting after the add/drop date for 15 week courses.

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, www.frontrange.edu/financialaid, or any of the FRCC Financial Aid Offices. We will make every effort 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.fafsa.gov

   a. There is a priority date of March 1st for completing the FAFSA in order to be eligible for certain available funds.

   b. A new FAFSA must be submitted each 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.

5. 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 need-determined 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, passed the General Equivalency Diploma (GED) or have met the federal ability to benefit requirement.

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. Be making 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, Section 132 of the Higher Education Amendments of 1976, 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 establishing and monitoring a standard of "Satisfactory Academic Progress" for continuation of 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 qualitative (the cumulative GPA) standards of the policy.

Academic progress will be reviewed at the time a financial aid application is received and 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.   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. A complete copy of the policy is available online at www.frontrange.edu/financialaid.

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 to provide assistance to qualified undergraduate students with documented financial need at state institutions of higher education. The Colorado Department of Higher Education sets award limits. Students must be Colorado residents and complete a FAFSA.

4. **Colorado Leveraging Educational Assistance Partnership (CLEAP)**. Funds for this program are provided from both federal and Colorado General Assembly funds. CLEAP grants are available to students with documented need. Students must complete a FAFSA. Funds are limited.

5. **Academic Competitiveness Grant (ACG).** This is a federal grant designed to provide financial assistance to recent high school graduates who have successfully completed a rigorous high school curriculum, as defined by the U.S. Department of Education. Students must also be Pell Grant recipients.

Work Study

1. **Federal Work Study.** Federally funded work programs 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.

2. **Colorado Work Study.** Funding 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.

3. **Colorado No-Need Work Study.** Funding 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.

Loans

1. **Federal Subsidized Stafford Loan.** These are low interest loans that are based on documented financial need.   The federal government pays the interest while the student is attending six or more credit hours and during a six month grace period. Repayment for interest and principal begins six months after the student has graduated or is no longer attending at least six credit hours. If applicable, origination fees will 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. The borrower is responsible for the interest payments during enrollment and repayment. Repayment begins six months after the student has graduated or is no longer attending at least six credit hours. If applicable, origination fees will 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. Origination fees are deducted prior to disbursement of funds. Repayment begins 30 days after the final disbursement.   Students must complete a FAFSA.

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 FRCC scholarships require some type of application. For a complete description of all FRCC Foundation scholarships and appropriate application procedures, visit www.frontrange.edu/financialaid.   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 Federal Pell Grants and unused academic year Federal Stafford Loan (subsidized and/or unsubsidized), or PLUS Loan eligibility.

Additional Information

Detailed information about financial aid grants, work study, loans and scholarships and application processes and

procedures, rules and regulations governing the various programs, payment procedures and cost of attending FRCC are available by visiting www.frontrange.edu/financialaid or at the Financial Aid Offices located at the telephone numbers listed below. Contact can also be made by 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

Services for Students

This section of the catalog describes programs and services available to students.

Student Services

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:

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

Admissions and Records

The Office of Admissions and Records processes all incoming applications for admission, admits international students, conducts student registration, processes adds, drops, and withdraws, contacts students for lawful presence verification, records grades, issues transcripts, certificates and degrees, processes graduation requests, evaluates incoming transcripts from other institutions, and maintains permanent records.

Bookstores

The Boulder County, Westminster, and Larimer Campuses have permanent bookstores that provide textbooks, supplies, and other items. The Brighton Center has limited bookstore hours 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. Financial aid recipients should contact their Financial Aid Office for Bookstore Account information.

Brighton Center Services

The Brighton Center provides the following services: admission and registration related activities, testing, student advising, academic support services, financial aid, and student life activities. Please contact the site for more information.

Career Counseling

Counselors assist students with career planning through career assessments, career counseling and career research. This process may occur in workshops or individual sessions. Fees may be charged for career planning workshops and career assessments. Numerous resources are available to assist in career research. These services are located in the advising department at each campus.

Child Care

At the Westminster Campus, the Children's Center provides a comprehensive childcare program for children from 6 weeks to 12 years of age. The Center seeks to assist each child to develop a positive self-image in a nurturing and challenging environment by offering activities that foster cognitive, social, emotional (consider rewording to emotional growth and motor skills.) and motor growth.

Preschool and pre-kindergarten care is available on a full-day, part-day and hourly basis. The Center is licensed for a maximum of 83 children and space is available on a first-come, first-registered basis. Enrollment is open to all children, including those developmentally delayed. Pre-registration is required. Fees vary according to the schedule and age of the child.

Boulder County students may call Children's Services, 303-441-3180 for childcare referrals. Larimer County students should call Child Care Resource and Referral at the Early Childhood Council of Larimer County, 970-377-3388. Brighton Center students should call Adams County Childcare Referral, 303-451-1061.

Computer Labs

FRCC provides up-to-date computer laboratory classrooms on all campuses for students to use. Please see the legal notices section of this catalog for FRCC's policy on computer virus protection.

Counseling

FRCC offers 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

Support services are available for students with documented disabilities. Services include:

- Interpreters for students with hearing impairments
- Note takers
- Text in alternate format
- Assistive devices
- Test accommodations

Accommodations are provided on request for students who document disabilities through the disability services office at their campus. For more information or to schedule an appointment: Boulder County Campus, Westminster Campus and Brighton Center, 303-404-5302; Larimer Campus, 970-204-8657, or www.frontrange.disabilityservices .

Educational Opportunity Centers

Three Educational Opportunity Centers are located within the college's service area and provide students with free counseling, career research, assistance with financial aid applications, and information on postsecondary educational institutions. The centers are in Greeley at 1220 11th Avenue, Suite 203 (970-352-3235); in Fort Collins at 419 Canyon Avenue, Suite 312 (970-221-4421); and in Northglenn at 10701 Melody Drive, Suite 300, 80234 (303-280-8705; fax 303-280-8715). An EOC counselor is available at the Boulder County, Larimer and Westminster Campuses, and the Brighton Center, to assist in completing financial aid applications.

Electronic Information Sources

FRCC has up-to-date information, including current course schedules, at the FRCC website www.frontrange.edu. In addition, students may access their own student information by logging in at www.frontrange.edu.

English as a Second Language

The college provides instruction in English as a Second Language for speakers of other languages to learn or improve their skills in English. Instruction is provided in an enjoyable environment that emphasizes improving the student's comfort level in communicating in English. For further information contact: Boulder County Campus at 303-678-3722, Larimer Campus at 970-204-8181, or Westminster Campus at 303-404-5252.

Food Service

On the Boulder County, Larimer and Westminster Campuses, food service is available in the Student/Campus Centers. Vending machines are available at all campuses.

Housing

The college does not have residence halls. Students are responsible for their own housing arrangements.

Information

Information Centers are located in the Campus Center, the Writing and Academic Skills Center, and the Office of Admissions and Records at the Westminster Campus; in Mount Antero and the Longs Peak Student Center at the Larimer Campus; at the Office of Admissions and Records and the Student Information Centers in the Administrative and Classroom Buildings on the Boulder County Campus; and in the reception area of the Brighton Center.

Gateway to College (GtC)

On the Westminster Campus, Gateway to College allows high school drop-outs or students near dropping out an opportunity to return to school successfully   and earn both high school and college credits.   Students must meet specific eligibility requirements and live in specific school districts.   Call 303-404-5700 or visit www.frontrange.edu/gateway for additional details.

General Education Development (GED)

On the Boulder County Campus (The Learning Center) and the Westminster Campus (Writing and Academic Skills Center), staff assists students enrolled in GED preparation courses to develop skills and knowledge in preparation for taking the General Education Development exams. At the Larimer Campus, GED preparation is provided by the Center for Adult Learning. Students work on writing skills, social studies, literature and the arts, science, and mathematics.

Learning Development Courses

Designed to strengthen the basic skills necessary for successful college studies, developmental studies courses are available in a variety of formats that range from classroom instruction to self-paced laboratory study.

Developmental studies courses offered (These courses do not apply toward any degree or certificate.):

AAA 050 Semester Survival

AAA 090 Academic Achievement Strategies

AAA 101 College 101: Student Experience

AAA 109 Advanced Academic Achievement Strategies

BIO 090 Basic Biology Concepts

ENG 030 Basic Writing Skills

ENG 060 Writing Fundamentals

ENG 090 Basic Composition

ESL 022 Intermediate Grammar

ESL 023 Advanced Grammar

ESL 032 Intermediate Conversation

ESL 033 Advanced Conversation

ESL 041 Basic Reading

ESL 042 Intermediate Reading

ESL 043 Advanced Reading

ESL 052 Intermediate Composition

ESL 053 Advanced Composition

ESL 055 Computer Basics for ESL Students

ESL 061 Vocational ESL I

ESL 062 Vocational ESL II

ESL 073 ESL Academic Study Strategies

MAT 030 Fundamentals of Mathematics

MAT 060 Pre-Algebra

MAT 090 Introductory Algebra

MAT 099 Intermediate Algebra

MAT 101 Enhanced Mathematics Support

REA 030 Basic Reading Skills

REA 060 Foundations of Reading

REA 090 College Preparatory Reading

Learning Support Services

FRCC offers a variety of services to provide instructional assistance in content areas. We also offer assistance with English as a Second Language, GED preparation, and basic skills development.

Boulder County's Learning Center is a comprehensive facility that supports instruction through individualized assistance. Boulder County students may use the Learning Center at no expense to ensure their academic success.

Larimer's Learning Opportunity Center provides academic support services to students in math, English and science classes; those seeking help with writing assignments for any class; and any student who wishes to improve learning skills including studying, note taking, and time management. Students with a disability are also supported through the Assistive Technology lab.

Westminster's Writing and Academic Skills Center (WASC) offers quality writing assistance to all students, alumni, faculty, staff, and community members. Writing Center tutors, who are all instructors at FRCC, work individually with students in any subject area to improve specific pieces of writing, but more importantly to offer strategies and resources for becoming more effective writers. Tutors can help students with all stages of the writing process: understanding assignments, generating, organizing, and developing topics, revising, and identifying and addressing conventions of grammar, mechanics, format, and documentation. More intensive one-on-one writing assistance is available by appointment. The WASC also provides academic support to students in all ESL, pre-GED, and developmental courses, including reading and study skills. Also, Pre-GED testing and evaluation of results are offered.

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

Tutoring

Supplemental tutoring services are available for qualified students experiencing academic difficulty. Instructor referral is required and students must meet eligibility requirements.

Libraries

FRCC provides two full-service libraries for its students. Both of these libraries represent collaborations with the local public libraries, offering expanded collections, services, information access, and staffing.

The College Hill Library is located at the west end of the Westminster Campus. This library is a joint-use facility with the Westminster Public Library.

The Harmony Library is a separate building on the west side of the Larimer Campus and is operated in partnership with the Poudre River Public Library District.

The library on the **Boulder County Campus** is a virtual library that utilizes electronic resources.

At the College Hill and Harmony 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 electronic books and information resources, as well as periodicals and newspapers on microfilm and microfiche.

The College Hill and Harmony Libraries participate in the Colorado Library Card program, entitling students to check out materials from other participating Colorado libraries, including the University of Colorado and Colorado State University. All FRCC libraries provide inter-library loan service to obtain books, articles and media from other libraries.

These libraries utilize online catalog systems. Through links from these systems, users may also search the catalogs of other libraries.

On the Boulder County Campus, students have access to a wide variety of local and remote library catalogs and are encouraged to utilize the inter-library loan process to obtain these materials.

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

Media Services

Media services are available at all FRCC sites. Media collections include interactive computer programs and videotapes. Individual viewing and listening equipment is available at most campuses.

Public Safety / Accident Reports

The Office of Public Safety enforces public safety, parking regulations and the smoking policy.

If an injury occurs on campus, the injured party must report the accident within 24 hours. Injuries should be reported to the Office of Public Safety at the Boulder County, Larimer and Westminster Campuses and to the Office of the Director at the Brighton Center.

Special Services

Single-Parent Program

The Larimer Campus provides support for single-parent students in their successful completion of a chosen educational program. Students in this program have access to numerous tools and resources intended to help them stay in college and earn a degree or technical certificate.

Disability Services

Accommodations are provided on request for students who document disabilities at least three weeks prior to the date needed. Contact the Office of Disability Services for more information and an appointment.

Student/Campus Centers

Boulder County Campus

The Student Center at the Boulder County Campus is the major focal point for student activities. The center provides access to multiple services including game room, conference facilities, the Front Range Cafe and the Bookstore.

Brighton Center

The Brighton Center offers cultural, educational, and social activities through student life events and student club activities.

Larimer Campus

The Longs Peak Student Center is a major focal point for campus student activities. The center provides access to multiple services including lounge areas, conference facilities and food service, and houses the Bookstore.

Westminster Campus

The Campus Center at Westminster Campus is the setting for numerous programs and activities. The center provides food service, conference facilities, and houses the Bookstore.

Student Email

Each new student will automatically receive an email account with FRCC when registered. Email is the official means of communication from the college. Students may access their email accounts by going to www.frontrange.edu and clicking on the student email login button.

Student Employment Services

Employability Assistance

Employability assistance is available at the Boulder County, Larimer and Westminster Campuses for students, alumni, and community members seeking jobs and career guidance. Westminster Campus also serves Brighton Center students. Resources include:

- Front Range Connect – an online job posting system
- Job search skills, resource information and seminars
- Statewide job openings
- Labor market data
- Sample resumes and critiquing
- Career information software
- On-campus student hourly work opportunities

Internship Education

Internship Education offers 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 semester 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 course enrollment.

Students are encouraged to apply at least one semester before the semester of internship. Students should consult an advisor regarding the transferability of internship credit.

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 the Student ID (SID). Students will still need their Social Security Number for Financial Aid, the College Opportunity Fund stipend, and other official documents.

Student Life

A variety of cultural, leadership and social opportunities are available to FRCC students. Student activities fees fund a number of these opportunities.

Student Governance

The Campus Student Government Association is the students' official voice to FRCC and the State Board (SBCCOE). The Student Government Associations/student advisory councils provide processes for student communication and participation with other college leaders in planning and governance.

Recognized Student Clubs and Organizations

A variety of student organizations are available, including those listed below *(B=Boulder County Campus, BG= Brighton Center, L=Larimer Campus, W=Westminster Campus)*:

- Accounting, Business and Computer Information Systems (ABC) (L)
- Anime Club (B)
- Architectural Engineering Construction Club (W)
- Automotive Club (L)
- Billards Club (B)
- Campus Crusade for Christ (L)
- Card Game Club (B)
- Chess Club (B)
- Christian Challenge (B, W)
- Collegiate Tea Society (B)
- Comic Book Club (B)
- Crime Club (L)
- Cycling Club (B)
- Dungeons and Dragons Club (B)
- Environmental Club (B)
- ESL Club (B)
- Equestrian Club (L)
- Fantasy Sports Club (B)
- Foosball Club (B)
- Future Educators of America (FEA) (B)
- Gay/Straight Alliance (GSA) (L, W)
- GLBTQ Club (B)
- Horticulture Club (L, W)
- Inspiration Club (Bible Study) (B)
- Interior Design Club (L)
- Knoetry Club (W)
- La Tertulia Española (BG)
- Los Estudiantes Unidos Hispanic / Latino Club (W)
- Latino Student Club (L, B)
- Medical Office Technology Club (MOT) (B)
- Motorcycle Club (B)
- Nursing Leaders Organization (B)
- Pharmacy Tech Club (W)
- Phi Theta Kappa International Honor Society (B, L, W)
- Philosophy Club (B)
- Pre-Law Club (B)
- Psychology Club   (L)
- Rotaract (Service) Club (B)
- Running Club (B)
- Science Club (L)
- Society of American Foresters (L)
- Student Colorado Registry of Interpreters for the Deaf (SCRID) (W)
- Student Government Association (SGA) (B,L,W)
- Student Nursing Association (L)
- Students Allied for Education (L)
- Students in Free Enterprise (W)
- Students for Sustainability (L)
- Students of Fine Arts (SOFA) (L)
- Students Veterinary Technology Association (L)
- Students With A Kid (SWAK) (L)
- The Music Lounge (L)
- The Players Acting Club (W)
- Toastmasters International (B)
- Video Game Club (B)
- Wolf P.A.C. (L)
- Wolf Riders (L)
- Women in Technical Trades (L)
- Writers on the Storm (L)
- Zombie Defense Council (L)

Publications

The *Boulder County Sun* (journalism class project) and *The Front Page* are the student newspapers at the Boulder County and Westminster Campuses.   *The Rangeview* is a student news publication at the Larimer Campus. These newspapers/newsletters provide students with information on college issues and events. *The Student Handbook* includes tips for student success and important information about college resources. Grievance and Due Process brochures provide policy and procedures for students.

Teacher License Renewal

Selected and approved community college courses may fulfill teacher license renewal requirements. For further information, contact the state Teacher License Renewal Office, 303-866-6628.

Testing Center Services

The Testing Centers provide a comprehensive array of testing services. These services may include the administration of the following tests: CLEP, ACT, GED, LSAT, MPRE, NBCC, Accuplacer, and CAAP. In addition, the centers proctor exams from other institutions.

FRCC-Larimer is an Authorized LaserGrade Testing Center. Contact the Larimer Testing Center for more information.

FRCC-Westminster is an Authorized Colorado General Educational Development (GED) Testing Center. Contact the Westminster Testing Center for more information.

FRCC-Boulder County is an Authorized Colorado General Educational Development (GED) Testing Center. Contact the Boulder County Testing Center for more information.

Veterans' Eligibility

A veteran or dependent of a veteran receiving VA benefits must maintain satisfactory progress while attending FRCC. Please refer to the FRCC Academic Progress Policy. Non-credit courses, audited courses, and courses not applicable to a declared program of study cannot be approved for veteran benefits.

An incomplete grade does not affect veteran benefits unless the incomplete is changed to a grade that lowers the student's cumulative GPA. The Academic Progress Policy may then apply.

For more information, please check with your local VA office or go to GIbill.va.gov.

Instructional Information

Instructional Philosophy Statement

General education, transfer education, and career/technical education programs are fundamental to the mission and purposes of Front Range Community College, and are the focus of college planning, resource allocation and accountability. They form the foundation for the many and varied activities FRCC provides as a learning institution.

General Education

General Education is intended to impart common knowledge, intellectual concepts, and attitudes that every educated person should possess. FRCC provides students with the General Education proficiencies and value of knowledge that prepare them for employment, baccalaureate and professional programs, lifelong learning, and for leadership, service and responsible citizenship. To accomplish this, General Education objectives include competency in the following areas (these expectations apply to all Associate degrees and to certificates of substantial length):

- Communication
- Critical Thinking
- Mathematical Concepts and Application
- Scientific Inquiry and Methodology
- Computer and Technological Literacy
- Historical and Social Perspectives
- Society and The Individual

Transfer Education

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. Transfer programs may not only prepare a student for a career but also for baccalaureate education.

Career/Technical Education

FRCC is committed to providing career and technical education as an integral part of its mission. Career instruction at the college strives to:

- Promote overall success in the workplace.
- Contribute to the development of well-educated citizens and workers.
- Provide specific skills and general knowledge to stay abreast of emerging technologies in rapidly changing environments.

Student Learning, Assessment and Accountability

FRCC's Assessment of Student Learning 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 seven areas of general education.
- Master the occupational/technical skills required in specific programs.
- Acquire the academic background for successful performance at four-year colleges or universities.
- Are prepared for employment, baccalaureate and professional programs, lifelong learning, and for leadership, service and responsible citizenship.
- Acquire or improve basic skills for success in college-level courses.

As part of this assessment process, students receiving associate degrees are required to complete the Collegiate Assessment of Academic Proficiency (CAAP) examination or other general education assessment during the final semester of their enrollment. Students receiving online degrees should contact the nearest FRCC Testing Center to arrange for testing. Students who have previously earned an A.A., A.S., Bachelor's Degree (or higher) are exempt from the CAAP exam. Please contact 970-204-8188 for Larimer and 303-404-5598 for all other campuses for more information or to verify your exemption.

Instructional Delivery

Classroom Instruction

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.

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 an email address are required.

Online Learning

Many courses are also available online, giving students the flexibility to do coursework from home, office, or anywhere with a computer and Internet connection.

FRCC Online Courses

Online courses include lectures, assignments and exams delivered through the Internet. Additional course information is obtained through textbooks. In most online courses, students communicate frequently with the instructor and other students via email and computer bulletin boards. Most assignments and tests are emailed or completed online. Some online courses require on-campus or proctored tests.

Students register for FRCC online courses just as they would any other FRCC course. Courses appear on the transcript, as do other FRCC courses. For more information about FRCC Online courses, including how to set up your computer for online courses, go to www.frontrange.edu/online.

CCCOnline

FRCC students may also enroll in online courses offered by the Colorado Community Colleges Online (CCCOnline) program.

CCCOnline courses are taught by instructors across the Colorado Community College System, but will appear on your FRCC transcript if you register for them through FRCC. For details about CCCOnline courses, please consult the CCCOnline website at www.ccconline.org.

Articulation Agreements

FRCC has established agreements with local school districts and businesses 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.

Credit for Prior Learning

The College provides the opportunity for students to receive credit for selected experience-based learning. Credit is awarded for college-level learning that includes knowledge, skills, and competencies that students have obtained as a result of their prior learning experiences. This learning may be acquired from a number of sources:

- Work or life experiences
- Correspondence and extension courses
- Individual study and reading
- Community and volunteer work
- Participation in informal courses and in-service training sponsored by associations, business, industry, and government.

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

1. Standardized Tests
   - College Level Examination Program (CLEP)
   - American College Testing Proficiency Program (ACT-PEP/RCE/EXCELSIOR)
   - Defense Activity for Nontraditional Educational Support (DANTES)
   - Advanced Placement (AP)
   - International Baccalaureate (IB)
2. Institutional Challenge Examinations
   - Examination equivalent to the comprehensive final exam
   - Examination may be written, oral, demonstration or a combination of all three
   - Evaluated by a designated subject expert
3. Published Guides
   - American Council on Education (ACE) for military training and experiences
   - ACE (non-collegiate) for industrial and corporate training programs
   - Other published guides developed by nationally recognized organizations
4. Portfolio Assessment
   - Portfolio requirements and assessment determined by college faculty

- Work or life experiences that meet the following criteria:
  - The learning is demonstrable
  - Includes both theoretical and applied components
  - Is at the college level, and
  - Is 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/cccns/faculty.html.

Standards for Awarding Credit for Prior Learning

1. Academic credit will only be awarded for those courses directly applicable to the student's declared certificate or degree program listed in the college's catalog.
2. Students may not earn more than 50 percent of the total required degree or certificate credit hours through prior learning methodologies. No more than 25 percent of the total degree or certificate credit hours are allowed by portfolio assessment. Credit hours awarded through prior learning methodologies do not satisfy the college's residency requirement.
3. Credit for prior learning may be applied toward the courses in the A.A., A.S. or A.G.S. articulated degree program only for the purpose of satisfying graduation requirements. Credit awarded through prior learning methodologies may meet FRCC degree requirements but invalidates the guaranteed transfer of A.A. and A.S. Degrees.
4. Credit for prior learning must meet or exceed the "C" grade level. Minimum cut-off scores on standardized tests are also established to meet the "C" grade level.

Policies and Procedures

To be awarded credit for prior learning, a student must be enrolled for a minimum of one credit hour at the college during the semester of the request.

No letter grade will be assigned for the awarding of credit for prior learning. The student's transcript will indicate the course number, title, and credit hours for which prior learning credit has been awarded.

Credit awarded by exam may be applied to meet Guaranteed Transfer (GT) courses but invalidates the guaranteed transfer of A.A. and A.S. degrees.

Fees

- Fees for credit for prior learning methodologies are to be paid prior to the evaluation and are non-refundable.
- Students will not pay tuition when seeking credit for prior learning via testing but will pay the following fees: (1) For standardized test, such as the CLEP, students will pay a $25 test administration fee plus the cost of the test; (2) For tests developed by FRCC faculty or for portfolio assessment, students will pay a $130 testing fee.
- Fees are not assessed for credit awarded by published guides, corporate/private industry training or military training.

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 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.

Supplemental Instruction

Continuing Education - Advance Your Career and Enrich Your Life

For Individuals

For over 20 years the Continuing Education division at Front Range Community College has been providing affordable and quality non-credit professional development and personal enrichment classes in your community. We are your resource for gaining new skills to make a career transition or discovering new interests to further your personal development. We offer a wide variety of programs and classes on campus and online. New classes start every week. Here are a few of our most popular offerings.

Technology
Introduction to Personal Computers
Microsoft Office Suite
    Access, Excel, PowerPoint, Word
Adobe Creative Suite
    Dreamweaver, Fireworks, Flash, InDesign, Illustrator & Photoshop
AutoCAD

Communication
Business Writing for Professionals
Foreign Languages
    Chinese, French, Italian, Japanese, Spanish
English as a Second Language

Art
Wire Wrap Jewelry Making
Glass Blowing
Digital Photography
Painting Workshop

Certificate & Employment Training Programs
Equine Management & Training
Bookkeeping
Solar Energy Industry Training
Energy Boost
Bioscience Boost

For more information and a complete listing of courses available to you, call 303-404-5465, or go to http://www.frontrange.edu/continuinged

For Organizations

We provide skills training, formal education and organizational development with a team of trainers, consultants and faculty working to maximize profit and productivity. We offer a needs assessment process scalable to meet your organization's unique challenges and customized solutions, from industry-specific, technical skill training to management and leadership development.

Our areas of expertise and related course offerings are:

Process Improvement & Quality
Management Training Modules
Project Management
Manufacturing Technology
Information Technology
Health & Safety Training

English as a Second Language & Foreign Language Credit Courses at Your Organization's Site

The Continuing Education department works closely with the Community Colleges of Colorado and the state Office of Economic Development to assist local companies in obtaining training grant funds for newly hired and existing workers. For more information and official guidelines and deadlines, please go to http://www.cccs.edu/Workforce/TrainingFunds.html or for companies in Larimer County call Lynn Vosler at 970-204-8176 or in Adams and Boulder County call Claudia Ossola at 303-404-5461.

For more information

Contact Continuing Education at the following locations:

Larimer County Campus, 970-204-8686

Boulder County Campus, Westminster Campus & Brighton Center, 303-404-5465

ROTC Air Force

(Westminster)

Air Force Reserve Officer Training Corps offers programs leading to a commission in the U.S. Air Force upon receipt of at least a bachelor's degree. FRCC students who wish to enroll for the University of Colorado AFROTC classes may register through FRCC. These classes are offered at the University of Colorado at Boulder. Contact the Department of Aerospace Studies, University of Colorado at Boulder at 303-494-8351.

ROTC Army

(Westminster)

FRCC and the University of Colorado at Boulder offers Army Reserve Officer Training Corps programs that lead to a commission in the active Army, Army Reserve and National Guard. Two years of the four-year program may be completed while attending FRCC. Military veterans may already qualify for the courses for juniors and seniors. Contact the Department of Military Science at the University of Colorado at Boulder at 303-492-3549.

Partnerships with K-12 Schools

FRCC is actively involved in partnerships with local K-12 schools that include:

High School Career and Technical Programs

The Larimer Campus offers career and technical programs for over 400 students from ten high schools in the Poudre (Fort Collins) and Thompson (Loveland) school districts. These on-campus programs, which provide a minimum of 325 hours of education and training, include Animal Technology and Research, Automotive Technology and Service, Carpentry/Home Framing, Culinary Arts, Wildlife/Forestry/Natural Resources, Welding and CAD – Metal Fabrication and Computer-Aided Design: Design It! Build It!, Ironworking and Industrial Welding, Architecture and Landscape Design, and Medical Careers Exploration.   (A program in Law Enforcement Exploration is under development.   Interested students should consult an advisor.)   Each program provides students between 26-28 elective and core academic credits (2.6-2.8 TSD) toward graduation from high school.   Most programs also provide some amount of articulated FRCC college credit.

Concurrent Enrollment Options

Through this program high school students may enroll in courses through the college and may either have tuition costs paid up front by their school district or be reimbursed for tuition upon satisfactory completion of the courses if approved by the high school. Dual high school and college credit may be awarded for Concurrent Enrollment courses.

School-based and Campus-based Credit and Non-credit Courses

The college collaborates with local schools to offer a wide variety of credit and non-credit courses for K-12 students and parents. The courses are offered both at the college and in local school facilities.

Small Business Development Center

Dedicated to assisting the new and existing small business owner succeed, the Small Business Development Center provides no cost, confidential, one-on-one counseling and technical assistance in business plan preparation, business research, marketing, feasibility analysis, finance management and current small business topics.

For more information:

Contact FRCC's Small Business Development Center at one of the following locations:

- Larimer Campus, 125 Howes Street, Suite 150, Fort Collins, 80521, 970-498-9295, *www.sbdc-larimer.com*
- Westminster Campus, 3645 W. 112th Avenue, Campus Box 6, Westminster, 80031, 303-404-5465, www.frontrange.edu/smallbusiness

International Travel-Study Abroad Program

The College values and is dedicated to providing quality educational experiences in and out of the classroom. The Study Abroad Program is an example of the excellent academic programs provided outside the traditional classroom.

This program was created to allow students the ability to increase cultural awareness, improve language skills, gain a new perspective on global issues, and meet new, life-long friends.

Students should note that this program has specific procedures and standards of student conduct that are strictly enforced, consistent with college procedures.

Further information may be obtained from the respective instructional departments participating in this program.

Academic Matters

Academic Appeals Procedures

Also see Legal Notices.

1. Statement of Purpose

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

2. Basis for Appeals

Academic appeals 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

a. 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.

b. 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: Subsequent to the appeals decision by the Dean of Instruction, the student may submit a written request to the campus Vice President for review of the 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.

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 poor academic performance from the GPA calculation.

Academic renewal applies only to courses taken at FRCC and may be awarded only one time. The original grades and credit hours remain on the permanent academic transcript, and credit hours are deducted from the student's remaining COF stipend eligible hours. A notation indicates that academic renewal has been awarded, and the GPA has been adjusted. Once academic renewal is granted, it is irreversible. Credit excluded from the GPA calculation cannot be used to satisfy the requirements for completion of an FRCC certificate or degree.

Students applying for academic renewal must complete the Academic Renewal Application Form available from the Office of Admissions and Records.

The following conditions must be met to apply for academic renewal:

1. The student must wait at least two calendar years after the coursework was completed to apply for academic renewal. The student cannot be enrolled in classes at FRCC during those two years.

2. The student must complete 6 semester credit hours with grades of "C" or better and obtain a GPA of 2.0 or higher during the term in which the application is submitted.

3. The academic renewal form must include an academic advisor's signature.

4. The transcript of a student awarded academic renewal will reflect the entire academic record, but the courses covered under academic renewal will be excluded from GPA calculation, and will be so identified.

5. Only grades of D and F are eligible for academic renewal and exclusion from GPA calculation.

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, Veterans Administration benefits, and other agencies' and organizations' policies. For clarification of the scope and definition of this policy, contact the Office of Admissions and

Records or an advisor.

Attendance

Attendance at all class sessions is critical for academic success. Students are expected to comply with the attendance policy established by instructors and departments.

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.

Academic Progress Policy

Front Range Community College strives to enroll students in courses appropriate to their level of academic preparedness and goals as determined by mandatory assessment and academic advising. All FRCC students are expected to achieve satisfactory progress as required by the Colorado Community College System. Application of this policy is intended to be informational and not punitive. Through the Academic Alert Process students will be informed when they are not making satisfactory academic progress.

Standards and Practices

1. The Academic Progress Procedure applies to all students who have attempted 13 or more semester hours of credit in residence while attending a college in the Colorado Community College System.

2. During the student's first 12 credit hours of enrollment, FRCC will monitor satisfactory progress through the Academic Alert process.

3. A student is considered in "Good Standing" when the student's Cumulative GPA is at least a 2.0 or greater for all courses completed at FRCC.

4. A student is placed on Probation (initial) when the student's cumulative GPA is less than 2.0 for all courses completed at FRCC.

5. A student is considered on Probation (continuing) when the student's cumulative GPA remains less than 2.0 for all courses completed at FRCC and the student's last term GPA is 2.0 or greater.

6. A student is placed on Suspension (initial) when his/her cumulative GPA is less than 2.0 for all classes completed at the College and the last term GPA is also below 2.0. A student placed on Suspension (initial) is not permitted to register for the next term after the term of suspension unless a suspension appeal is approved. A student may appeal 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 to register for classes will remain on probation (continuing) and must complete the semester with a semester GPA of 2.0 to continue enrollment.

7. A student is placed on Suspension (second) when his/her cumulative GPA is less than 2.0 for all classes completed at the College and the last term GPA is also below 2.0 for the second time. A student placed on Suspension (second) is not permitted to register for the next two terms after the term of suspension unless a suspension appeal is approved. A student may appeal 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 to register for classes will remain on probation (continuing) and must complete the semester with a semester GPA of 2.0 to continue enrollment.

8. A student is placed on Suspension (third) when his/her cumulative GPA is less than 2.0 for all classes completed at the College and the last term GPA is also below 2.0 for the third time. A student placed on Suspension (third) is not permitted to register for the next two years after the term of suspension unless a suspension appeal is approved.

9. Summer semester will count as a term of non-enrollment when a student sits out due to suspension.

Course Load

During fall and spring semesters the typical course load for full-time students is at least 12 credit hours. For tuition and certification purposes, students who register for fewer than 12 credit hours are considered part-time for all three terms during the academic year.

Students must have the appropriate Dean or designee's approval to enroll for more than 18 credits in any semester.

Students receiving financial aid or veteran's benefits should contact the respective office for clarification.

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 on 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 through *www.frontrange.edu*.

Grading Symbols:

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
Other Grading Symbols:	
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 at registration or by the deadline listed in the course schedule. 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 VA representative 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:

This grade is a "C" or better. It may not be applied to any course in the Colorado Guaranteed Transfer Program for General Education. No more than six semester hours may be applied to the Associate of Arts or Associate of Science Degree.

U - Unsatisfactory:

This grade is 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, 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.

Last Date of Attendance:

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

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.

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

For example:

Course	Credits	Grade	Grade Points	GPA
MAT 121 College Algebra	4 cr.	C (2 pts)	8	2.0
HWE 110 Fitness Condi-tion ing	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.

Academic Integrity

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 the 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, and cheating. 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 or invention of any information or citation in an academic exercise; intentionally or knowingly helping or attempting to help another to violate a provision of the institutional code of academic integrity.

Plagiarism is the adoption or reproduction of ideas or words or statements of another person as one's own without acknowledgment. When a student submits work that purports to be his or her 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, disposition, or use of examinations or answer keys to examinations; unauthorized alteration, forgery, or falsification of academic records; unauthorized sale or purchase of examinations, papers, or assignments.

If the member of the faculty suspects or has accused a student of academic dishonesty (according to but not limited by the definitions above), he or she will make a copy of the test/quiz/assignment at issue, return the copy to the student if appropriate, keep the original, inform the chair of the department and submit the 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.

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 grades and disciplinary sanctions based on the college's appeals policies.

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

Grades Required for Program 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.

Application for Graduation

Students must apply for graduation to receive an associate degree or certificate.   The Degree/Certificate Application is available through the Office of Admissions and Records and online at www.frontrange.edu/arforms. The form must be submitted before the published deadline during the term the student plans to complete the graduation requirements. Refer to the class schedule for deadlines. If you need college credits from another institution applied in order to meet graduation requirements and/or your approved Credit for Prior Learning/AP Scores, those must be processed prior to submitting a graduation application: completed Transfer Credit Evaluation Form submitted by the graduation application deadline and an official transcript from the transfer institution. If a student does not complete all the graduation requirements during the term for which they apply, a new application for graduation must be submitted by the deadline for the term in which the requirements will be completed. Students completing an associate degree program are required to complete the CAAP (Collegiate Assessment of Academic Proficiency) or other general education assessment as a requirement for graduation.

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 will be included in the GPA calculation. 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

Commencement

A commencement ceremony is held at the end of each spring semester. In addition to spring applicants, students who have received a degree and/or certificate in the previous summer or fall semester of the same academic year are invited to participate in the commencement ceremony.

Transcript Requests

Please note the following information when requesting a FRCC transcript:

- Official transcripts must be requested in writing, either by mail, by completing an online request via online student account or at www.frontrange.edu/arforms. You may also complete the request form at the Office of Admissions and Records.
- Official transcripts are provided at no cost. However, same day transcripts and overnight requests are $10.00 each in addition to the overnight mailing cost.
- Transcripts are not released if a student has financial obligations to the college or another Colorado Community College System college.
- The college does not certify transcripts that have been sent to FRCC from other institutions.
- Transcripts are released in accordance with the Family Educational Rights and Privacy Act. (See Family Educational Rights and Privacy Act.)

Written requests should include the following information:

1. Student's full name
2. Student's ID Number
3. Indication of whether the transcript is to be sent immediately or should be held for current semester grades
4. Address where the transcript is to be sent
5. Student's signature

Change of Contact Information

Students must present a valid picture ID when notifying the Office of Admissions and Records of any change of address, telephone number or e-mail address. Students may also update their student account information online at www.frontrange.edu.

Name Change Policy

Students are required to 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. In addition, students must also submit a Demographic Change Form with the required documentation.

Dropping and Withdrawing from Courses

Dropping Courses:

- A course may be dropped during the first 15 percent of the course.
- Deadlines for dropping may vary from course to course. Students should consult the instructor for the appropriate deadline.
- Dropping a course deletes the course from the student's record.
- Nonattendance does not activate the drop process. Failure to officially drop a course by the applicable deadline results in financial obligation for course tuition and fees and may result in the assignment of a failing grade and incurring a financial obligation.
- Students receiving financial aid and/or a College Opportunity Fund (COF) stipend are required to officially drop courses regardless of whether or not they are in

attendance. Failure to properly drop courses results in liability for tuition payment and a reduction in remaining stipend eligible hours.

Withdrawal:

- A withdrawal after the first 15 percent but before 80 percent of the course is completed does not delete the course from the academic record.
- A withdrawal may be submitted by the applicable deadline before 80 percent of the course has been completed.
- A withdrawal (W) is noted on the transcript, but does not affect the GPA.
- A withdrawal deducts credit hours from a student's remaining COF stipend eligible hours.
- Nonattendance does not activate the withdrawal process and may result in failing grades and/or financial obligation.
- To withdraw, students may login to their student account at www.frontrange.edu or complete, sign and submit a withdrawal form to the Office of Admissions and Records.

Appeal of Drop or Withdrawal Deadlines:

FRCC has published deadlines in the class schedule for dropping and withdrawing from courses that allow students equal opportunity to drop or withdraw, regardless of the reason. An appeal process is available to students who experience an extenuating circumstance beyond their control which affects their ability to participate in coursework for a prolonged period of time or ability to drop/withdraw by the deadline. Students must complete an appeal application packet, including supporting documentation, for their appeal to be considered.

- A student must document the extenuating circumstance. (Please note that a change in employment or work hours does not constitute an extenuating circumstance.) Extenuating circumstances include military personnel and emergency management officials being unexpectedly required to report for temporary duty (TDY) during an academic term.
- Appeals must be submitted within 12 months of the end of the semester for which the student is appealing.
- Repeated appeals for the same reason will not be considered.
- The decision of the College-Wide Student Appeals Committee is final.

Repeated Courses

All FRCC college-level courses may be repeated at FRCC. 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 in the GPA. The highest grade will be used in the GPA calculation. All courses, regardless of the grade earned, are eligible for repeat as long as all other enrollment requirements have been met. All credit hours earned for initial and repeated courses will be deducted from the student's remaining 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 and designated courses that may be repeated for professional or personal development. FRCC will designate courses that may be repeated within program requirements.

If both the initial and the repeated course were taken in fall 2006 or after, the system automatically removes the lower grade from the GPA. If either the initial or the repeated course (or both) were taken prior to fall 2006, then the student must complete a repeat course petition form and submit it to the Admissions and Records Office.

For Developmental Courses only:

The grading system for developmental courses changed beginning fall 2006, and developmental grades are no longer included in the cumulative GPA calculation. However, if either the initial course or the repeated course (or both) were taken prior to fall 2006, then the student must complete a repeat course petition form for the developmental coursework and submit it to the Admissions and Records Office.

Transferring Credit to FRCC

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 from the institution where the credits were earned. As part of this process, students should complete a Transfer Credit Evaluation Request Form, available from the Admissions and Records Office.

The transfer of academic credit to the college is governed by the following policies or procedures:

- A grade of "C" or better is required for transfer. Transfer credit will not be awarded for courses with "D", "F" or "U" grades.
- The college may examine credits to ensure that the content is not outdated or obsolete.
- Transfer credit is accepted from postsecondary institutions that are accredited by one of the approved six (6) regional accrediting associations or by specified articulation agreements.
- Grades for courses transferred to FRCC are not calculated in the FRCC GPA.

FRCC and the Student Appeals Process

Under the authority of the Colorado Department of Higher Education, collegiate institutions are to have specified appeal processes to resolve student issues or problems.

The most common student appeals pertain to general education courses, transfer, tuition classification, financial aid, faculty problems, or grades.

FRCC has a number of appeal processes within the college to not only comply with required state procedures, but also to provide a student an opportunity to a fair and expeditious means to resolve issues that affect a student's enrollment.

While the college continually strives to ensure that a student's experience at the institution is positive, it is inherent that issues will arise from decisions affecting a student.

Depending on the nature of the dispute, there are a variety of levels at which a student may request a review of a decision. These levels of review include appeal processes that are both

internal and external to the college.

Transfer Appeals Process

Consistent with the requirements of the Colorado Department of Higher Education, FRCC has 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:

Appeal and Initial Decision

1. The appeal must be submitted to the Director (or Coordinator) of Admissions and Records in writing 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 30 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 Initial Decision

1. The initial decision may be appealed by filing a written appeal with the Academic Vice President 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.

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

3. The student will be notified in writing by the college of its decision regarding the transfer appeal and the rationale for the decision. In addition, the student may appeal the decision to CCCS.

Appeal to Colorado Community College System (CCCS)

1. The student may appeal the decision of the college by filing a written appeal with the Academic Vice President of CCCS within five calendar days of the postmark date of the letter notifying the student of the college's decision. If the student fails to file an appeal within this time period, the college's decision will be binding.

2. CCCS staff shall review and reach a decision on the appeal within five calendar days after the appeal is filed.

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

the decision. In addition, the student is informed by the college that the student may appeal the decision by filing a written appeal with the Colorado Department of Higher Education within five calendar days of the postmark date of the letter notifying the student of the decision by CCCS.

Appeal to Colorado Department of Higher Education (CDHE)

1. The student initiates an appeal by informing CDHE in writing of the situation and the reason for the appeal.

2. The Executive Director of CDHE will immediately notify the chief executive officer of the institution of the appeal and request the institution to submit documentation for the decision being appealed by the student. The institution will submit documentation within 15 calendar days of notification.

3. The chair of the Transfer Advisory Council (TAC) will schedule the appeal to be heard at the council or convene a special meeting if the appeal cannot be heard within 30 calendar days. Both the student and the institution will be notified of the TAC's meeting time and location. The student and/or institution may be asked to make an oral presentation to the council. The resolution of a dispute will be completed within 30 calendar days from the time an appeal is made to CDHE. In no circumstance will the appeal process extend beyond 120 days from the day the student was notified of the transcript evaluation unless it benefits the student.

4. Should an appeal be filed involving a campus or governing board represented on the TAC, the TAC member will not participate in hearing the appeal, nor may the member be present during the discussion. Transfer disputes will be heard by only those members who are not directly affiliated with the institution or governing board involved.

5. TAC's consideration of the appeal will include, but is not limited to, the institution's compliance with the Statewide Transfer Policy, the governing board policy statement, the institutional Articulation/Transfer Agreements, the transfer appeal process, and the student's compliance with the institutional Articulation/Transfer Agreements. In the absence of a written Articulation/Transfer Agreement for the program in question, TAC will conduct a transcript evaluation and determine the transferability of individual courses.

6. The chair will inform CDHE's Executive Director of TAC's recommendation.

7. CDHE's Executive Director will inform the chief executive officer and the chief academic officer and the student of the final determination and advise the institution's chief executive officer to implement the recommendation within five calendar days.

8. The institution's chief academic officer will inform the TAC chair within 10 calendar days of the action taken in regard to the final determination.

9. TAC's recommendation and the action taken by the institution will be reported to CDHE as an information agenda item.

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, 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.

Full Appeal Process

CDHE will assist the student by identifying the institutional staff person or department that is in the best position to resolve the issues directly. If the institution does not act on the appeal within thirty days from the date that the appeal was received or if the outcome appears inconsistent with state policy, the student may formally request a hearing by CDHE's Appeal Board.

For issues that are within CDHE's authority CDHE will convene the appeals board. The board will request that the institution provide a 1-2 page document with rationale for its decision. The board will review the submitted material within two weeks and will meet to hear the student's appeal. The board will recommend appropriate action. To ensure timely implementation of the decision, the decision will be communicated to both the student and institution. Such decisions are binding and not subject to further appeal. CDHE will respond to all other issues by letter.

Expedited Appeal Process

An enrolled student who receives a transcript evaluation that does not award general education transfer credit for a "state guaranteed" general education course may appeal directly to CDHE. The disputed credit must be earned in a course in which a student received a grade of "C" or better at a Colorado participating state guaranteed transfer institution. The student must have enrolled during the 2002-03 academic year or later. CDHE's staff will resolve such cases within five days.

Student Complaints

FRCC Policy on Tracking of Student Complaints

To comply with the Higher Learning Commission policy, FRCC maintains records of the formal, written student complaints filed with the offices of the Chief Executive Officer, the Chief Academic Officer and the Chief Student Services Officer including information about the disposition of the complaints, and those referred to external agencies for final resolution.

Since FRCC has a college system with site-based administrative leadership, compliance with the policy will include the top three administrative levels at each site as well as the college-wide level. In addition to the President, the site Vice Presidents, Deans of Instruction and Deans of Student Services will record the process of complaint resolution and the outcome for any formal, written complaint received.

Definitions:

Complaint: 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. A grievance may or may not be a complaint based on the above guidelines. Appeals which request a re-examination of a decision are not considered a complaint unless there is some type of adverse action against a student from the decision or some alleged procedural unfairness is documented.

Student: A student is an individual who is currently enrolled full or part-time or who has recently been enrolled in the institution. Previously enrolled students may be considered a student if they meet the criteria to re-enroll without having to reapply for admission. If the individual would have to reapply, then the complainant is not a student for the purposes of this policy.

Formal Written Complaint: Only complaints in writing that are mailed or delivered to an appropriate officer, or those referred back to the college by the Higher Learning Commission, are considered formal complaints. These written complaints must be addressed to an officer of the college and be signed by the student. Informal communications from students such as emails or faxes will not be considered a formal written complaint.

Procedures:

Step 1: Administrators (Dean, Vice President or President) receiving a formal written complaint will complete the FRCC Record of Student Complaint Tracking Form after a concern has been resolved/concluded. The administrator resolving the complaint must inform the student registering the complaint that information about complaints must be shared with the Higher Learning Commission for accreditation purposes but that individual identities will be shielded.

Step 2: The Complaint Tracking Form and all paperwork involved in the complaint resolution will be forwarded to the Office of the Dean of Student Services. The Dean of Student Services will maintain records of the complaints by case number.

Step 3: The Dean of Student Services will be responsible to provide the complaint tracking records to the Higher Learning Commission reviewers upon request. Tracking will include at least the two years prior to the date of the evaluation visit.

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 and is not required to complete developmental-level courses. A student may choose, for personal reasons, to extend the amount of time spent completing the degree.

General Requirements for Degrees and Certificates

For Degrees students must:

- Complete a minimum of 60 semester hours for the Associate of Arts, Science, or General Studies Degree, or a specified number of semester hours for an Associate of Applied Science Degree.

- Earn a grade of C or better in all courses required for the AA, AS, AGS, and AAS Degree. Programs may designate minimum acceptable grades. Students must earn a cumulative GPA of 2.0 for all courses attempted for the Associate of Arts, Science, or General Studies degree. Please note that some degree programs require a higher GPA, or have minimum required grades above a "C" grade.

- Complete a minimum of 15 credit hours toward a degree at FRCC. These 15 credits hours include online courses taught by FRCC; CCCOnline courses are considered FRCC courses when the student declares FRCC as their home institution.

- For A.A.S. Degrees, at least 15 credit hours must be within the major.

- Exceptions to the 15-credit-hour minimum may be made for designated A.A.S. Degrees.

- Provide official transcripts to the college if transfer credit is to be applied.

- Complete a graduation application by the 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 Substitution of Course Program Requirements Form and approved by the appropriate dean, Chief Academic Officer, and Registrar.

- Complete the requirements in effect for the officially declared program of study at the time of initial enrollment as published in the college catalog. 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.

- If returning to FRCC after not being enrolled at the college for 12 consecutive months or more, students are subject to the requirements of the catalog in effect for the program of study at the time of re-enrollment. If students subsequently change their program of study, they are subject to the requirements of the catalog in effect at the time of change of program of study. Students must officially change their program with the Admissions and Records Office.

- Complete the college's competency examinations during the final semester of enrollment (CAAP-Collegiate Assessment of Academic Proficiency) or other general education assessments required for associate degree-seeking students.

Standards for Awarding Credit for Prior Learning

1. Academic credit will only be awarded for those courses directly applicable to the student's declared certificate or degree program listed in the college's catalog.

2. Students may not earn more than 50 percent of the total required degree or certificate credit hours through prior learning methodologies. No more than 25 percent of the total degree or certificate credit hours are allowed by portfolio assessment. Credit hours awarded through prior learning methodologies do not satisfy the college's residency requirement.

3. Credit for prior learning may be applied toward the courses in the A.A., A.S. or A.G.S. articulated degree program only for the purpose of satisfying graduation requirements. Credit awarded through prior learning methodologies may meet FRCC degree requirements but invalidates the guaranteed transfer of A.A. and A.S. Degrees.

4. Credit for prior learning must meet or exceed the "C" grade level. Minimum cut-off scores on standardized tests are also established to meet the "C" grade level.

Students may not:

- Apply more than a total of six semester hours of independent study 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.

- Be granted more than one academic degree or applied science degree during an academic year. For this purpose, each academic year begins with the summer semester. If requirements for multiple degrees are met, the highest degree is awarded. (The hierarchy of academic degrees, from high to low, is A.S., A.A., and A.G.S). Multiple A.A.S. Degrees may be awarded in different academic years if degree requirements are met. A single degree with multiple concentrations will not be considered as separate degrees.

- Use credits from an A.S. towards an A.A., nor can a person who earns and A.A. or A.S. apply more than 31 of those credits to an A.G.S.

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" grade to be eligible for a certificate.

- Provide official transcripts to the college if transfer credits are to be applied.

- Complete a graduation application by the deadline.
- Complete the requirements in effect for the officially declared certificate at the time of initial enrollment, as published in the college catalog. If returning to FRCC after not being enrolled at the college for 12 consecutive months or more, students are subject to the requirements of the catalog in effect for the certificate at the time of re-enrollment. If students subsequently change their declared certificate program(s), they are subject to the requirements of the catalog in effect at the time of change of certificate program. Students must officially change their program with the Office of Admissions and Records.

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://highered.colorado.gov/Academics/TranferslStudents.html. Transfer information may also be obtained from four-year college and university representatives who visit FRCC.

Transfer Agreements:

FRCC participates in the Colorado Guaranteed Transfer Program for General Education. (See Colorado Guaranteed Transfer Program for General Education.) In addition, special transfer agreements between FRCC and other institutions or between the Colorado Community College System and other institutions enable students to transfer credits from specified FRCC programs. Transfer agreements exist with the following colleges and universities:

- Adams State College
- Colorado School of Mines
- Colorado State University
- Colorado State University-Pueblo
- DeVry University
- Fort Lewis College
- Johnson and Wales University
- Mesa State College

- Metropolitan State College of Denver
- Regis University
- University of Colorado-Boulder
- University of Colorado-Colorado Springs
- University of Colorado-Denver
- University of Colorado-Health Sciences Center
- University of Denver
- University of Northern Colorado
- University of Phoenix
- Western State College

Transfer courses will be evaluated for FRCC course equivalency and applied to certificate and degree requirements according to state and college policy.

Guaranteed Transferability

of Associate of Arts Degree and Associate of Science Degree to Colorado Public Four-Year Colleges and Universities

Colorado's agreement between public colleges and universities guarantees that when a student completes an A.A. or A.S. Degree—at least 60 semester credit hours of coursework completed with a grade of "C" or better in every course— a student may transfer to a public baccalaureate program with a Liberal Arts and Sciences major (e.g. English, history, mathematics) and graduate after earning an additional 60 semester credit hours. Courses with an "S/U" grade will not be eligible for Guaranteed Transferability. While a student is guaranteed not to have to complete more than 60 semester hours to graduate, completing a baccalaureate degree within two years depends on the number of credits a student completes each semester at the four-year institution, course sequencing in the student's major (e.g., some upper-division major courses require that a student first complete lower-division major courses), as well as course availability.

This agreement does not apply to Business, Elementary Education, Early Childhood Education and Nursing degrees. These specific majors have statewide articulation agreements that have specific lower division requirements.

Many other majors also require that students select specific courses from the GT Pathways courses. Students should contact a transfer advisor at the earliest opportunity to review appropriate transfer guides. In addition to indicating which lower division courses are required for articulated programs, these guides will indicate to a student which lower division courses are most appropriate for the student's major. These guides indicate the appropriate prerequisites for sequenced coursework that should be taken before transferring to a four-year college.

Credit earned through prior learning, Advanced Placement, International Baccalaureate, articulation, military, corporate, challenge exam, portfolio credit, substations, independent study, correspondence courses, CLEP and other tested-only credit may not apply and will invalidate the guaranteed transfer of AA and AS degrees. The institution to which a student transfers will evaluate these credits according to its own policies.

The Transfer Policy of the Colorado Department of Higher Education is available at: http://highered.colorado.gov/Academics/Transfers/Students.html

Student Appeal Process for Colorado Guaranteed Transfer Program for General Education

If an eligible student believes that the Colorado Guaranteed Transfer for General Education has not been appropriately applied in the transfer process, a student may appeal this decision.

To be eligible under this policy, a student must meet the following criteria:

- Graduated with A.A. /A.S. Degree.
- Completed 35 credits of state-guaranteed general education.
- Earned grade of "C" or better in each course applied to the degree.
- Received a transfer evaluation by the four-year institution indicating that the student will need to complete more than 60 semester hours to complete a baccalaureate degree.

The community college transfer advisor may provide the student with information on the appeals policy and process. This information is also available at: http://highered.colorado.gov/Academics/Transfers/Students.html

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.).

Statewide Transfer Policy and 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 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.

Colorado Guaranteed Transfer Program for General Education

The Colorado Department of Higher Education, in consultation with Colorado's public colleges and universities, has developed a standardized concept of general education and identified the specific courses to satisfy these general education requirements. These specific courses have been designed to ensure that students demonstrate competency in reading, critical thinking, written communication, mathematics and technology. Within this framework, general education provides the student with the opportunity to apply these skills across diverse disciplines, including communication, mathematics, humanities, natural sciences, and social sciences.

In addition, the State Guaranteed General Education Courses are identified by the following designations:

GT — Guaranteed Transfer Course Disciplines:

AH - Arts and Humanities

   AH1 – Arts and Expression

   AH2 – Literature and Humanities

   AH3 – Ways of Thinking

   AH4 – Foreign Languages

CO - Communications

   CO1-Introductory Writing

   CO2-Intermediate Writing

   CO3-Advanced Writing

HI - History

MA - Mathematics

SC - Natural and Physical Sciences

   SC1 – Science with Laboratory

   SC2 – Science without Laboratory

SS - Social and Behavioral Sciences

   SS1 – Economic or Political Systems

   SS2 – Geography

   SS3 – Human Behavior, Culture or Social Frameworks

The following courses have been identified by the Colorado Department of Higher Education as being the Colorado Guaranteed Transfer Program for General Education:

Note: These courses may be completed at any Colorado public higher education institution beginning on the date they became effective as a GT Pathways course. For a list of effective dates, go to http://highered.colorado.gov/Academics/Transfers/gtPathways/curriculum.html. Completion of the course requirements by credit for prior learning or transfer from any other institution may meet FRCC degree requirements but invalidate the guaranteed transfer of A.A. /A.S. Degrees.

Arts and Humanities • GT - AH

ART 110 Art Appreciation	GT-AH1	3
ART 111 Art History: Ancient to Medieval	GT-AH1	3
ART 112 Art History: Renaissance to Modern	GT-AH1	3
ART 207 Art 1900 to the Present	GT-AH1	3
DAN 125 History of Dance I	GT-AH 1	3
FRE 211 French Language III	GT-AH4	3
FRE 212 French Language IV	GT-AH4	3
GER 211 German Language III	GT-AH4	3
GER 212 German Language IV	GT-AH4	3
HUM 115 Humanities: World Mythology	GT- AH2	3
HUM 121 Humanities: Early Civilizations	GT- AH2	3
HUM 122 Humanities: Medieval to Modern	GT- AH2	3
HUM 123 Humanities: The Modern World	GT- AH2	3
ITA 211 Italian Language III	GT-AH4	3
ITA 212 Italian Language IV	GT-AH4	3
JPN 211 Japanese Language III	GT-AH4	3
JPN 212 Japanese Language IV	GT-AH4	3
LIT 115 Introduction to Literature I	GT-AH2	3
LIT 201 Masterpieces of Literature I	GT-AH2	3
LIT 202 Masterpieces of Literature II	GT-AH2	3
LIT 205 Ethnic Literature	GT-AH2	3

LIT 211 Survey of American Literature I	GT-AH2	3
LIT 212 Survey of American Literature II	GT-AH2	3
LIT 221 Survey of British Literature I	GT-AH2	3
LIT 222 Survey of British Literature II	GT-AH2	3
LIT 225 Introduction to Shakespeare	GT-AH2	3
LIT 268 Celtic Literature	GT-AH2	3
MUS 120 Music Appreciation	GT-AH1	3
MUS 121 Music History I	GT-AH1	3
MUS 122 Music History II	GT-AH1	3
MUS 123 Survey of World Music	GT-AH 1	3
MUS 125 History of Jazz Music	GT-AH 1	3
PHI 111 Introduction to Philosophy	GT-AH3	3
PHI 112 Ethics	GT-AH3	3
PHI 113 Logic	GT- AH3	3
PHI 114 Comparative Religions	GT-AH3	3
PHI 214 Philosophy of Religion	GT-AH3	3
RUS 211 Russian Language III	GT-AH4	3
RUS 212 Russian Language IV	GT-AH4	3
SPA 211 Spanish Language III	GT-AH4	3
SPA 212 Spanish Language IV	GT-AH4	3
THE 105 Theatre Appreciation	GT-AH1	3
THE 211 Development of Theatre I	GT-AH1	3
THE 212 Development of Theatre II	GT-AH1	3

Communications • GT - CO

ENG 121 English Composition I	GT-CO1	3
ENG 122 English Composition II	GT-CO2	3
ENG 201 Writing for Public Discourse	GT-CO3	3

Mathematics • GT - MA

MAT 120 Mathematics for the Liberal Arts *(Not Applicable to the A.S. Degree)*	GT-MA1	4
MAT 121 College Algebra	GT-MA1	4
MAT 122 College Trigonometry	GT-MA1	3
MAT 123 Finite Mathematics (A.A. Degree only)	GT-MA1	4
MAT 125 Survey of Calculus	GT-MA1	4
MAT 135 Introduction to Statistics (*Not Applicable to the A.S. Degree*)	GT-MA1	3
MAT 155 Integrated Mathematics I (*Not Applicable to the A.S. Degree*) Students must also complete MAT 156 to meet the total MA1 requirement for the A.A. Degree.	GT-MA1	3
MAT 156 Integrated Mathematics II (*Not Applicable to the A.S. Degree*) Students must also complete MAT 155 to meet the total MA1 requirement for the A.A. Degree.	GT-MA1	3
MAT 166 Pre-Calculus	GT-MA1	5
MAT 201 Calculus I	GT-MA1	5
MAT 202 Calculus II	GT-MA1	5
MAT 203 Calculus III	GT-MA1	4
MAT 204 Calculus III with Engineering Applications	GT-MA1	5
MAT 255 Linear Algebra	GT-MA1	3
MAT 265 Differential Equations	GT-MA1	3

History • GT - HI

HIS 101 Western Civilization: Antiquity to 1650	GT-HI1	3
HIS 102 Western Civilization: 1650 to Present	GT-HI1	3
HIS 111 The World: Antiquity to 1500	GT-HI1	3
HIS 112 The World: 1500 to Present	GT-HI1	3
HIS 201 U.S. History to the Reconstruction	GT-HI1	3
HIS 202 U.S. History since the Civil War	GT-HI1	3
HIS 208 American Indian History	GT-HI1	3
HIS 225 Colorado History	GT-HI1	3
HIS 236 U.S. History Since 1945	GT-HI1	3
HIS 244 History of Latin America	GT-HI1	3
HIS 247 20th Century World History	GT-HI1	3
HIS 249 History of Islamic Civilization	GT-HI1	3
HIS 255 The Middle Ages	GT-HI1	3
HIS 260 U.S. Foreign Relations History	GT-HI1	3

Social and Behavioral Sciences • GT - SS

ANT 101 Cultural Anthropology	GT-SS3	3
ANT 107 Introduction to Archaeology	GT-SS3	3
ANT 111 Physical Anthropology	GT-SS3	3
ANT 215 Indians of North America	GT-SS3	3
ECO 101 Economics of Social Issues	GT-SS1	3
ECO 201 Principles of Macroeconomics	GT-SS1	3
ECO 202 Principles of Microeconomics	GT-SS1	3
ECO 245 Environmental Economics	GT-SS1	3
ETH 200 Introduction to Ethnic Studies	GT-SS3	3
GEO 105 World Regional Geography	GT-SS2	3
GEO 106 Human Geography	GT-SS2	3
JOU 105 Introduction to Mass Media	GT-SS3	3
POS 105 Introduction to Political Science	GT-SS1	3
POS 111 American Government	GT-SS1	3
POS 125 American State and Local Government	GT-SS1	3
POS 205 International Relations	GT-SS1	3
POS 225 Comparative Government	GT-SS1	3
PSY 101 General Psychology I	GT-SS3	3
PSY 102 General Psychology II	GT-SS3	3
PSY 205 Psychology of Gender	GT-SS3	3
PSY 217 Human Sexuality	GT-SS3	3
PSY 226 Social Psychology	GT-SS3	3
PSY 227 Psychology of Death and Dying	GT-SS3	3
PSY 235 Human Growth and Development	GT-SS3	3
PSY 238 Child Development	GT-SS3	3
PSY 249 Abnormal Psychology	GT-SS3	3
SOC 101 Introduction to Sociology I	GT-SS3	3
SOC 102 Introduction to Sociology II	GT-SS3	3
SOC 205 Sociology of Family Dynamics	GT-SS3	3
SOC 215 Contemporary Social Problems	GT-SS3	3
SOC 216 Sociology of Gender	GT-SS3	3
SOC 220 Sociology of Religion	GT-SS3	3
SOC 231 Sociology of Deviant Behavior	GT-SS3	3

WST 200 Introduction to Women's Studies	GT-SS3	3

Natural and Physical Sciences • GT - SC

AST 101 Astronomy I	GT-SC1	4
AST 102 Astronomy II	GT-SC1	4
BIO 105 Science of Biology (*Not Applicable to the A.S. Degree*)	GT-SC1	4
BIO 111 General College Biology I with Lab	GT-SC1	5
BIO 112 General College Biology II with Lab	GT-SC1	5
BIO 201 Human Anatomy and Physiology I	GT-SC1	4
BIO 202 Human Anatomy and Physiology II	GT-SC1	4
BIO 204 Microbiology	GT-SC1	4
BIO 221　Botany	GT-SC1	4
CHE 101　Introduction to Chemistry I (*Not Applicable to the A.S. Degree*)	GT-SC1	5
CHE 102 Introduction to Chemistry II (*Not Applicable to the A.S. Degree*)	GT-SC1	5
CHE 105 Chemistry in Context (*Not Applicable to the A.S. Degree*)	GT-SC1	5
CHE 111 General College Chemistry I	GT-SC1	5
CHE 112 General College Chemistry II	GT-SC1	5
ENV 101 Introduction to Environmental Science	GT-SC1	4
GEY 111 Physical Geology	GT-SC1	4
GEY 121 Historical Geology	GT-SC1	4
GEO 111 Physical Geography - Landforms	GT-SC1	4
MET 150 General Meteorology	GT-SC1	4
PHY 105 Conceptual Physics	GT-SC1	4
PHY 107 Health Physics	GT-SC1	4
PHY 111 Physics: Algebra-Based I with Lab	GT-SC1	5
PHY 112 Physics: Algebra-Based II with Lab	GT-SC1	5
PHY 211 Physics: Calculus-Based I with Lab	GT-SC1	5
PHY 212 Physics: Calculus-Based II with Lab	GT-SC1	5
SCI 155 Integrated Science I (*Not Applicable to the A.S. Degree*) Students must also complete SCI 156 to meet the total GT-SC1 requirement for the A.A. Degree.	GT-SC1	4
SCI 156 Integrated Science II (*Not Applicable to the A.S. Degree*) Students must also complete SCI 155 to meet the total GT-SC1 requirement for the A.A. Degree.	GT-SC1	4

Associate of Arts Degree

Code: (F _AA _AA)

This is a transfer degree designed for students who plan to major in subject areas such as: anthropology, art, criminal justice, economics, English, ethnic studies, foreign language, geography, history, humanities, journalism, literature, music, philosophy, political science, psychology, 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 three

areas of emphasis: Business, Early Childhood Education, and Elementary Education.   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 an area of concentration unless the student completes the requirements for one of the areas of emphasis noted above.

Requirements for the Associate of Arts Degree:

• Communications: 9 credits

ENG 121 English Composition I	GT-CO1	3
ENG 122 English Composition II	GT-CO2	3
‡ COM 115 Public Speaking		3
or		
‡ COM 125 Interpersonal Communication		3

Note: ‡ This requirement is a Colorado Community College System requirement and is in addition to the State Guaranteed General Education Transfer Courses.

• Arts and Humanities: 9 credits

Select three courses, with no more than two courses from any GT category:

Arts • GT-AH1

ART 110 Art Appreciation	GT-AH1	3
ART 111 Art History: Ancient to Medieval	GT-AH1	3
ART 112 Art History : Renaissance to Modern	GT-AH1	3
ART 207 Art 1900 to the Present	GT-AH1	3
DAN 125 History of Dance I	GT-AH1	3
MUS 120 Music Appreciation	GT-AH1	3
MUS 121 Music History I	GT-AH1	3
MUS 122 Music History II	GT-AH1	3
MUS 123 Survey of World Music	GT-AH1	3
MUS 125 History of Jazz Music	GT-AH1	3
THE 105 Theatre Appreciation	GT-AH1	3
THE 211 Development of Theatre I	GT-AH1	3
THE 212 Development of Theatre II	GT-AH1	3

Literature and Humanities • GT-AH2

HUM 115 World Mythology	GT-AH2	3
HUM 121 Humanities: Early Civilization	GT-AH2	3
HUM 122 Humanities: Medieval to Modern	GT-AH2	3
HUM 123 Humanities: The Modern World	GT-AH2	3
LIT 115 Introduction to Literature I	GT-AH2	3
LIT 201 Masterpieces of Literature I	GT-AH2	3
LIT 202 Masterpieces of Literature II	GT-AH2	3
LIT 205 Ethnic Literature	GT-AH2	3
LIT 211 Survey of American Literature I	GT-AH2	3
LIT 212 Survey of American Literature II	GT-AH2	3
LIT 221 Survey of British Literature I	GT-AH2	3
LIT 222 Survey of British Literature II	GT-AH2	3
LIT 225 Introduction to Shakespeare	GT-AH2	3
LIT 268 Celtic Literature	GT-AH2	3

Ways of Thinking • GT-AH3

PHI 111 Introduction to Philosophy	GT-AH3	3
PHI 112 Ethics	GT-AH3	3
PHI 113 Logic	GT-AH3	3
PHI 114 Comparative Religions	GT-AH3	3
PHI 214 Philosophy of Religion	GT-AH3	3
PHI 218 Environmental Ethics	GT-AH3	3

Foreign Languages • GT-AH4

FRE 211 French Language III	GT-AH4	3
FRE 212 French Language IV	GT-AH4	3
GER 211 German Language III	GT-AH4	3
GER 212 German Language IV	GT-AH4	3
ITA 211 Italian Language III	GT-AH4	3
ITA 212 Italian Language IV	GT-AH4	3
JPN 211 Japanese Language III	GT-AH4	3
JPN 212 Japanese Language IV	GT-AH4	3
RUS 211 Russian Language III	GT-AH4	3
RUS 212 Russian Language IV	GT-AH4	3
SPA 211 Spanish Language III	GT-AH4	3
SPA 212 Spanish Language IV	GT-AH4	3

• Mathematics: 3-5 credits

Select one from the following:

MAT 120 Mathematics for the Liberal Arts (Not Applicable to the A.S. Degree)	GT-MA1	4
MAT 121 College Algebra	GT-MA1	4
MAT 122 College Trigonometry	GT-MA1	3
MAT 123 Finite Mathematics (Not Applicable to the A.S. Degree)	GT-MA1	4
MAT 125 Survey of Calculus	GT-MA1	4
MAT 135 Introduction to Statistics	GT-MA1	3
(Not Applicable to the A.S. Degree)		
MAT 155 Integrated Mathematics I (Not Applicable to the A.S. Degree) Students must also complete MAT 156 to meet the total MA1 requirement for the A.A. Degree.	GT-MA1	3
MAT 156 Integrated Mathematics II (Not Applicable to the A.S. Degree) Students must also complete MAT 155 to meet the total MA1 requirement for the A.A. Degree.	GT-MA1	3
MAT 166 Pre-Calculus	GT-MA1	5
MAT 201 Calculus I	GT-MA1	5
MAT 202 Calculus II	GT-MA1	5
MAT 203 Calculus III	GT-MA1	4
MAT 204 Calculus III with Engineering Applications	GT-MA1	5
MAT 255 Linear Algebra	GT-MA1	3
MAT 265 Differential Equations	GT-MA1	3

• Social and Behavioral Sciences: 9 credits

Select three courses, one of which must be a History course from GT-HI1, with no more than two courses from any GT category:

History • GT-HI1

HIS 101 Western Civilization: Antiquity to	GT-HI1	3

1650		
HIS 102 Western Civilization: 1650 to Present	GT-HI1	3
HIS 111 The World: Antiquity to 1500	GT-HI1	3
HIS 112 The World: 1500 to Present	GT-HI1	3
HIS 201 U.S. History to the Reconstruction	GT-HI1	3
HIS 202 U.S. History since the Civil War	GT-HI1	3
HIS 208 American Indian History	GT-HI1	3
HIS 225 Colorado History	GT-HI1	3
HIS 236 U.S. History Since 1945	GT-HI1	3
HIS 244 History of Latin America	GT-HI1	3
HIS 247 20th Century World History	GT-HI1	3
HIS 249 History of Islamic Civilization	GT-HI1	3
HIS 255 The Middle Ages	GT-HI1	3
HIS 260 U.S Foreign Relations History	GT-HI1	3

Economics and Political Systems • GT-SS1		
ECO 101 Economics of Social Issues	GT- SS1	3
ECO 201 Principles of Macroeconomics	GT- SS1	3
ECO 202 Principles of Microeconomics	GT- SS1	3
ECO 245 Environmental Economics	GT-SS1	3
POS 105 Introduction to Political Science	GT-SS1	3
POS 111 American Government	GT-SS1	3
POS 125 American State and Local Government	GT-SS1	3
POS 205 International Relations	GT-SS1	3
POS 225 Comparative Government	GT-SS1	3
Geography • GT-SS2		
GEO 105 World Regional Geography	GT-SS2	3
GEO 106 Human Geography	GT-SS2	3
Human Behavior, Cultural, or Social Frameworks • GT-SS3		
ANT 101 Cultural Anthropology	GT-SS3	3
ANT 107 Introduction to Archaeology	GT-SS3	3
ANT 111 Physical Anthropology	GT-SS3	3
ANT 215 Indians of North America	GT-SS3	3
ETH 200 Introduction to Ethnic Studies	GT-SS3	3
JOU 105 Introduction to Mass Media	GT-SS3	3
PSY 101 General Psychology I	GT-SS3	3
PSY 102 General Psychology II	GT-SS3	3
PSY 205 Psychology of Gender	GT-SS3	3
PSY 217 Human Sexuality	GT-SS3	3
PSY 226 Social Psychology	GT-SS3	3
PSY 227 Psychology of Death and Dying	GT-SS3	3
PSY 235 Human Growth and Development	GT-SS3	3
PSY 238 Child Development	GT-SS3	3
PSY 249 Abnormal Psychology	GT-SS3	3
SOC 101 Introduction to Sociology I	GT-SS3	3
SOC 102 Introduction to Sociology II	GT-SS3	3
SOC 205 Sociology of Family Dynamics	GT-SS3	3
SOC 208	GT-SS3	3

SOC 215 Contemporary Social Problems	GT-SS3	3
SOC 216 Sociology of Gender	GT-SS3	3
SOC 220 Sociology of Religion	GT-SS3	3
SOC 231 Sociology of Deviant Behavior	GT-SS3	3
WST 200 Introduction to Women's Studies	GT-SS3	3

• *Physical and Life Sciences: 8 credits*

Select two courses: (Credits over eight will be applied to the electives category)

AST 101 Astronomy I	GT-SC1	4
AST 102 Astronomy II	GT-SC1	4
*BIO 105 Science of Biology (*Not Applicable to the A.S. Degree*)	GT-SC1	4
BIO 111 General College Biology I with Lab	GT-SC1	5
BIO 112 General College Biology II with Lab	GT-SC1	5
BIO 201 Human Anatomy and Physiology I	GT-SC1	4
BIO 202 Human Anatomy and Physiology II	GT-SC1	4
BIO 204 Microbiology	GT-SC1	4
BIO 221 Botany	GT-SC1	5
*CHE 101 Introduction to Chemistry I (*Not Applicable to the A.S. Degree*)	GT-SC1	5
*CHE 102 Introduction to Chemistry II (*Not Applicable to the A.S. Degree*)	GT-SC1	5
*CHE 105 Chemistry in Context (*Not Applicable to the A.S. Degree*)	GT-SC1	5
CHE 111 General College Chemistry I	GT-SC1	5
CHE 112 General College Chemistry II	GT-SC1	5
ENV 101 Environmental Science	GT-SC1	4
GEO 111 Physical Geography	GT-SC1	4
GEY 111 Physical Geology	GT-SC1	4
GEY 121 Historical Geology	GT-SC1	4
MET 150 General Meteorology	GT-SC1	4
*PHY 105 Conceptual Physics (*Not Applicable to the A.S. Degree*)	GT-SC1	4
*PHY 107 Health Science (*Not Applicable to the A.S. Degree*)	GT-SC1	4
PHY 111 Physics: Algebra-Based I with Lab	GT-SC1	5
PHY 112 Physics: Algebra-Based II with Lab	GT-SC1	5
PHY 211 Physics: Calculus-Based I with Lab	GT-SC1	5
PHY 212 Physics: Calculus-Based II with Lab	GT-SC1	5
*SCI 155 Integrated Science I (*Not Applicable to the A.S. Degree*) Students must also complete SCI 156 to meet the total SC1 requirement for the A.A. Degree.	GT-SC1	4
*SCI 156 Integrated Science II (*Not Applicable to the A.S. Degree*) Students must also complete SCI 155 to meet the total SC1 requirement for the A.A. Degree.	GT-SC1	4
State Guaranteed General Education Courses		*35-37 Credits*
COM 115 or COM 125 (Colorado Community College System Requirement)		*3 Credits*
Electives (Selected from the A.A. Degree		*20-22 Credits*

Approved Electives List).

Total Required Credits for A.A. Degree	**60 Credits**

Note: This guarantee excludes areas of concentration in Early Childhood Education, Elementary Education, Business, Engineering, Nursing and some pre-professional degrees.

* The Colorado Guaranteed Transfer Program for General Education and the Colorado Community College System General Education requirements have been incorporated into this degree. Completion of the degree with a grade of "C" or better in every course guarantees that the student can transfer to any Colorado public four-year institution AND complete any liberal arts or science baccalaureate degree in an additional 60 credits.

Approved Electives Course List for Associate of Arts Degree

Elective credit for the Associate of Arts Degree must be completed from the following list of approved prefixes and courses. While some of the following courses may be considered as generally transferable, a student's major at a four-year college or university may limit what credit may be applied to satisfy degree requirements at that institution. Selection of elective credit and course sequencing should be done in consultation with an advisor.

ACC	121, 122
AIR	All AIR courses in this catalog
ANT	All ANT courses in this catalog
ARA	111, 112
ARM	All ARM courses in this catalog
ART	All ART courses in this catalog
ASL	121,122
AST	All AST courses in this catalog
BIO	105, 111, 112, 115, 201, 202, 204, 221, 222
BUS	115, 216, 217, and 226
CHE	101, 102, 105, 111, 112, 205, 211, 212
CHI	111, 112
CIS	115, 118
COM	All COM courses in this catalog
CRJ	110, 235
CSC	All CSC courses in this catalog
DAN	All DAN courses in this catalog
	Note: DAN and PED combined up to three credits cumulative. DAN 125 may be applied as an arts and humanities elective rather than a physical activities course.
ECO	All ECO courses in this catalog
ENG	121 and above
ETH	All ETH courses in this catalog
FRE	111, 112, 211, 212
GEO	All GEO courses in this catalog
GER	111, 112, 211, 212, 235
GEY	All GEY courses in this catalog
HIS	All HIS courses in this catalog
HUM	All HUM courses in this catalog
HWE	100
ITA	111, 112, 211, 212
JOU	All JOU courses in this catalog

JPN	111, 112, 211, 212
LIT	All LIT courses in this catalog
MAT	120 or above
MET	All MET courses in this catalog
MGD	133, 221, 222, 233
MUS	All MUS courses in this catalog
PED	All PED courses in this catalog
	Note: DAN and PED combined up to three credits cumulative
PHI	All PHI courses in this catalog
PHY	105 and above
POS	All POS courses in this catalog
PSY	101, 102, 205, 217, 226, 227, 235, 238, 239, 249
RUS	111, 112, 211, 212
SCI	155, 156
SOC	All SOC courses in this catalog
SPA	111, 112, 114, 211, 212, 235, 261, 262
THE	All THE courses in this catalog
WST	All WST courses in this catalog

Note: No more than 6 semester hours in independent study or internships in these approved prefixes may be applied to the Associate of Arts of degree.

Specialized courses applicable only to Associate of Arts Degree with a designated concentration.

A.A. with an area of emphasis in Early Childhood Education

ECE   101, 102, 205, 238, 241 and other ECE courses selected in consultation with an advisor.

A.A. with an area of emphasis in Elementary Education

EDU   221 and other EDU courses selected in consultation with an advisor

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 who place into ENG 090 (or above), and MAT 099 (or above), and REA 090 (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.

Requirements for the Associate of Applied Science Degree

• General Education Requirements

In addition to program requirements, Associate of Applied Science Degrees require completion of the following general education requirements:

* Communications	3

* Mathematics	3
Select six semester hours from two of the following areas	6
* Arts and Humanities	
* Physical and Life Sciences	
* Social and Behavioral Sciences	
Select three semester hours from any of the following areas	3
* Communications	
* Arts and Humanities	
* Mathematics	
* Physical and Life Sciences	
* Social and Behavioral Sciences	

• Specific Program Requirements 45-60 semester hrs.

Total Required General Education Credits	**15**
Total Specific Program Requirements	*45-60*
Total Required Credits for AAS Degree	**60-75**

*Note: *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 Electives List for the AAS degree. A program advisor must approve any course substitution to the specific program requirements.*

Associate of Science Degree

Code: (F_AS_AS)

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

The community colleges in Colorado are approved to offer one Associate of Science Degree. This degree has a generic major of liberal arts.

Requirements for the Associate of Science Degree:

• Communications: 9 credits

ENG 121 English Composition I	GT-CO1	3
ENG 122 English Composition II	GT-CO2	3
‡ COM 115 Public Speaking		3
or		
‡ COM 125 Interpersonal Communication		3

Note: ‡   This requirement is a Colorado Community College System requirement and is in addition to the State Guaranteed General Education Transfer Courses.

• Arts and Humanities: 9 credits

Select three courses, with no more than two courses from any GT category:

Arts • GT-AH1

ART 110 Art Appreciation	GT-AH1	3
ART 111 Art History: Ancient to Medieval	GT-AH1	3
ART 112 Art History: Renaissance to Modern	GT-AH1	3
ART 207 Art History: 1900 to the Present	GT-AH1	3
DAN 125 History of Dance I	GT-AH 1	3
MUS 120 Music Appreciation	GT-AH1	3
MUS 121 Music History I	GT-AH1	3
MUS 122 Music History II	GT-AH1	3
MUS 123 Survey of World Music	GT-AH1	3
MUS 125 History of Jazz Music	GT-AH1	3
THE 105 Theatre Appreciation	GT-AH1	3
THE 211 Development of Theatre I	GT-AH1	3
THE 212 Development of Theatre II	GT-AH1	3

Literature and Humanities • GT-AH2

HUM 115 World Mythology	GT-AH2	3
HUM 121 Humanities: Early Civilizations	GT-AH2	3
HUM 122 Humanities: Medieval to Modern	GT-AH2	3
HUM 123 Humanities: The Modern World	GT-AH2	3
LIT 115 Introduction to Literature I	GT-AH2	3
LIT 201 Masterpieces of Literature I	GT-AH2	3
LIT 202 Masterpieces of Literature II	GT-AH2	3
LIT 205 Ethnic Literature	GT-AH2	3
LIT 211 Survey of American Literature I	GT-AH2	3
LIT 212 Survey of American Literature II	GT-AH2	3
LIT 221 Survey of British Literature I	GT-AH2	3
LIT 222 Survey of British Literature II	GT-AH2	3
LIT 225 Introduction to Shakespeare	GT-AH2	3
LIT 268 Celtic Literature	GT-AH2	3

Ways of Thinking • GT-AH3

PHI 111 Introduction to Philosophy	GT-AH3	3
PHI 112 Ethics	GT-AH3	3
PHI 113 Logic	GT-AH3	3
PHI 114 Comparative Religions	GT-AH3	3
PHI 214 Philosophy of Religion	GT-AH3	3

Foreign Languages • GT-AH4

FRE 211 French Language III	GT-AH4	3
FRE 212 French Language IV	GT-AH4	3
GER 211 German Language III	GT-AH4	3
GER 212 German Language IV	GT-AH4	3
ITA 211 Italian Language III	GT-AH4	3
ITA 212 Italian Language IV	GT-AH4	3
JPN 211 Japanese Language III	GT-AH4	3
JPN 212 Japanese Language IV	GT-AH4	3
RUS 211 Russian Language III	GT-AH4	3
RUS 212 Russian Language IV	GT-AH4	3
SPA 211 Spanish Language III	GT-AH4	3
SPA 212 Spanish Language IV	GT-AH4	3

• Mathematics: 3-5 credits

Select one from the following:

MAT 121 College Algebra	GT-MA1	4
MAT 122 College Trigonometry	GT-MA1	3
MAT 125 Survey of Calculus	GT-MA1	4
MAT 166 Pre-Calculus	GT-MA1	5
MAT 201 Calculus I	GT-MA1	5
MAT 202 Calculus II	GT-MA1	5
MAT 203 Calculus III	GT-MA1	4
MAT 204 Calculus III with Engineering Applications	GT-MA1	5
MAT 255 Linear Algebra	GT-MA1	3
MAT 265 Differential Equations	GT-MA1	3

• Social and Behavioral Sciences: 9 credits

Select three courses, one of which must be a History course from GT-HI1, with no more than two courses from any GT category:

History • GT-HI1

HIS 101 Western Civilization: Antiquity to 1650	GT-HI1	3
HIS 102 Western Civilization: 1650 to Present	GT-HI1	3
HIS 111 The World: Antiquity to 1500	GT-HI1	3
HIS 112 The World: 1500 to Present	GT-HI1	3
HIS 201 U.S. History to the Reconstruction	GT-HI1	3
HIS 202 U.S. History since the Civil War	GT-HI1	3
HIS 208 American Indian History	GT-HI1	3
HIS 225 Colorado History	GT-HI1	3
HIS 236 U.S. History Since 1945	GT-HI1	3
HIS 244 History of Latin America	GT-HI1	3
HIS 247 20th Century World History	GT-HI1	3
HIS 249 History of Islamic Civilization	GT-HI1	3
HIS 255 The Middle Ages	GT-HI1	3
HIS 260 U.S. Foreign Relations History	GT-HI1	3

Economics and Political Systems • GT-SS1

ECO 101 Economics of Social Issues	GT-SS1	3
ECO 201 Principles of Macroeconomics	GT-SS1	3
ECO 202 Principles of Microeconomics	GT-SS1	3
ECO 245 Environmental Economics	GT-SS1	3
POS 105 Introduction to Political Science	GT-SS1	3
POS 111 American Government	GT-SS1	3
POS 125 American State and Local Government	GT-SS1	3
POS 205 International Relations	GT-SS1	3
POS 225 Comparative Government	GT-SS1	3

Geography • GT-SS2

GEO 105 World Regional Geography	GT-SS2	3
GEO 106 Human Geography	GT-SS2	3

Human Behavior, Cultural, or Social Frameworks • GT-SS3

ANT 101 Cultural Anthropology	GT-SS3	3
ANT 107 Introduction to Archaeology	GT-SS3	3
ANT 111 Physical Anthropology	GT-SS3	3
ANT 215 Indians of North America	GT-SS3	3
ETH 200 Introduction to Ethnic Studies	GT-SS3	3
JOU 105 Introduction to Mass Media	GT-SS3	3
PSY 101 General Psychology I	GT-SS3	3
PSY 102 General Psychology II	GT-SS3	3
PSY 205 Psychology of Gender	GT-SS3	3
PSY 217 Human Sexuality	GT-SS3	3
PSY 226 Social Psychology	GT-SS3	3
PSY 227 Psychology of Death and Dying	GT-SS3	3
PSY 235 Human Growth and Development	GT-SS3	3
PSY 238 Child Development	GT-SS3	3
PSY 249 Abnormal Psychology	GT-SS3	3
SOC 101 Introduction to Sociology I	GT-SS3	3
SOC 102 Introduction to Sociology II	GT-SS3	3
SOC 205 Sociology of Family Dynamics	GT-SS3	3
SOC 215 Contemporary Social Problems	GT-SS3	3
SOC 216 Sociology of Gender	GT-SS3	3
SOC 220 Sociology of Religion	GT-SS3	3
SOC 231 Sociology of Deviant Behavior	GT-SS3	3
WST 200 Introduction to Women's Studies	GT-SS3	3

• Physical and Life Sciences: 8 credits

Select two courses: (Credits over eight will be applied to the electives category)

AST 101 Astronomy I	GT-SC1	4
AST 102 Astronomy II	GT-SC1	4
BIO 111 General College Biology I with Lab	GT-SC1	5
BIO 112 General College Biology II with Lab	GT-SC1	5
BIO 201 Human Anatomy and Physiology I	GT-SC1	4
BIO 202 Human Anatomy and Physiology II	GT-SC1	4
BIO 204 Microbiology	GT-SC1	4
BIO 221 Botany	GT-SC1	5
CHE 111 General College Chemistry I	GT-SC1	5
CHE 112 General College Chemistry II	GT-SC1	5
ENV 101 Environmental Science	GT-SC1	4
GEO 111 Physical Geography	GT-SC1	4
GEY 111 Physical Geology	GT-SC1	4
GEY 121 Historical Geology	GT-SC1	4
MET 150 General Meteorology	GT-SC1	4
PHY 107 Health Science	GT-SC1	4
PHY 111 Physics: Algebra-Based I with Lab	GT-SC1	5
PHY 112 Physics: Algebra-Based II with Lab	GT-SC1	5
PHY 211 Physics: Calculus-Based I with Lab	GT-SC1	5
PHY 212 Physics: Calculus-Based II with Lab	GT-SC1	5

State Guaranteed General Education Courses		***35-37 Credits***
COM 115 or COM 125 (Colorado Community College System Requirement)		***3 Credits***
Electives (Selected from the A.S. Degree Approved Electives List) (A minimum of 18 of these credits must be selected from the following disciplines: astronomy, biology, chemistry,		***20-22 Credits***

computer science, engineering, geology, mathematics, meteorology and physics)

Total Required Credits for A.S. Degree	**60 Credits**

Note:

This guarantee excludes areas of concentration in Early Childhood Education, Elementary Education, Business, Engineering, Nursing and some pre-professional degrees.

* The Colorado Guaranteed Transfer Program for General Education and the Colorado Community College System General Education requirements have been incorporated into this degree. Completion of the degree with a grade of "C" or above in every course guarantees that the student can transfer to any Colorado public four-year institution AND complete any liberal arts or science baccalaureate degree in an additional 60 credits. Science degree seeking students should consult with an advisor on specific science courses needed to finish a baccalaureate degree in 60 additional credits.

Approved Electives Course List for Associate of Science Degree

Elective credit for the Associate of Science Degree must be completed from the following list of approved prefixes and courses. A minimum of 18 credits must be from courses with the ° designation. While some of the following courses may be considered as generally transferable, a student's major at a four-year college or university may limit what credit may be applied to satisfy degree requirements at that institution. Selection of elective credit and course sequencing should be done in consultation with an advisor.

ACC	121, 122
AIR	All AIR courses in this catalog
ANT	All ANT courses in this catalog
ARA	111, 112
ARM	All ARM courses in this catalog
ART	All ART courses in this catalog
ASL	121, 122
AST	°All AST courses in this catalog
BIO	°111, °112, °115, °201, ° 202, ° 204, °221, °222
BUS	115, 216, 217, and 226
CHE	°111, °112, °205, °211, °212
CHI	111, 112
COM	All COM courses in this catalog
CRJ	110, 235
CSC	°All CSC courses in this catalog
DAN	All DAN courses in this catalog
	Note: DAN and PED combined up to three credits cumulative. DAN 125 may be applied as an arts and humanities elective rather than a physical activities course.
ECO	All ECO courses in this catalog
ENG	121 and above
ETH	All ETH courses in this catalog
ENV	101
FRE	111, 112, 211, 212
GEO	All GEO courses in this catalog
GER	111, 112, 211, 212, 235
GEY	°All GEY courses in this catalog

HIS	All HIS courses in this catalog
HUM	All HUM courses in this catalog
HWE	100
ITA	111, 112, 211, 212
JOU	All JOU courses in this catalog
JPN	111, 112, 211, 212
LIT	All LIT courses in this catalog
MAT	°121 or above (except for MAT 123, 135, 155 and 156)
MET	°All MET courses in this catalog
MGD	133, 221, 222, 233
MUS	All MUS courses in this catalog
PED	All PED courses in this catalog
	Note: DAN and PED combined up to three credits cumulative.
PHI	All PHI courses in this catalog
PHY	°111 and above
POS	All POS courses in this catalog
PSY	101, 102, 205, 217, 226, 227, 235, 238, 239, 249
RUS	111, 112, 211, 212
SOC	All SOC courses in this catalog
SPA	111, 112, 114, 211, 212, 235, 261, 262
THE	All THE courses in this catalog
WST	All WST courses in this catalog

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

° A minimum of 18 credits must be from courses with the ° designation.

Associate of General Studies Degree

Code: F_AGS_AGS

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.

All transfer degrees require a "C" or above.

Requirements for the Associate of General Studies Degree

• **Communications: 3 credits**

Select one course from the following:

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

• **Mathematics: 3 credits**

MAT	107 or above*

• **Physical and Life Science: 3 credits**

Select three credits from the following:

AST	All AST courses in this catalog
BIO	All BIO courses in this catalog
CHE	All CHE courses in this catalog

GEO	111, 112 (may fulfill the physical and life science or social and behavioral science requirement, but not both)
GEY	All GEY courses in this catalog
MET	All MET courses in this catalog
PHY	All PHY courses in this catalog
SCI	155*, 156*

• Social and Behavioral Sciences: 3 credits

Select 3 credits from the following:

ANT	All ANT courses in this catalog
ECO	All ECO courses in this catalog
ETH	All ETH courses in this catalog
GEO	All GEO courses in this catalog (GEO 111 and 112 may fulfill the physical and life science or social and behavioral science requirement, but not both)
HIS	All HIS courses in this catalog
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 (WST may fulfill the arts and humanities or social and behavioral science requirement, but not both)

• Arts and Humanities: 3 credits

Select three credits from the following:

ARA	101, 102, 111, 112
ART	All ART courses in this catalog
ASL	121, 122
CHI	101, 102, 111, 112
FRE	101, 102, 111, 112, 211, 212
GER	101, 102, 111,112, 211, 212, 235
HUM	All HUM courses in this catalog
ITA	101, 102, 111, 112
JPN	101, 102, 211, 212
LIT	All LIT courses in this catalog
MUS	All MUS courses in this catalog
PHI	All PHI courses in this catalog
RUS	101, 102, 111, 112, 211, 212
SPA	101, 102, 111, 112, 114, 115, 201, 202, 211, 212, 215, 235, 261, 262
THE	All THE courses in this catalog
WST	All WST courses in this catalog (WST may fulfill the arts and humanities or social and behavioral science requirement, but not both)

GENERAL EDUCATION ELECTIVES: In addition to the courses selected to meet the general education requirements defined above, at least 15 additional general education credits must be selected from the Approved Elective Course List for the Associate of Arts degree.

OTHER ELECTIVES: An additional 30 credits of electives are needed for the AGS degree. These 30 credits may be general education courses or career technical courses or any combination of the two.

Total Required Credits for AGS Degree   60

*SCI 155 and SCI 156 must both be completed if they will be used to fulfill science requirement.

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* MAT 155 and MAT 156 must both be completed if they will be used to fulfill math requirement.

Note: No more than 6 semester hours in independent study or internships in these approved prefixes may be applied to the Associate of General Studies.

Note: At least 15 credits applied toward this degree must be courses approved as part of the Colorado Guaranteed Transfer Program for General Education.   See Colorado Guaranteed Transfer Program for General Education, for a list of applicable courses.

Note: Developmental courses cannot be applied to the AGS degree.

Note: All courses applied to the AGS degree must be completed with a grade of C or above and the student's overall GPA must be 2.0 or above.

Approved General Education Electives List for Associate of Applied Science Degree

• Communications:

ENG*	121 and above * ENG 110 applies only when specified as a degree requirement
COM	All COM courses in this catalog

• Arts and Humanities:

ARA	111, 112
ART	All ART courses in this catalog
ASL	121, 122
CHI	111, 112
FRE	111, 112, 211, 212
GER	111, 112, 211, 212, 235
HUM	All HUM courses in this catalog
ITA	111, 112, 211, 212
JPN	111, 112, 211, 212
LIT	All LIT courses in this catalog
MUS	All MUS courses in this catalog
PHI	All PHI courses in this catalog
RUS	111, 112, 211, 212
SPA*	111, 112, 114, 211, 212, 235, 261, 262 * 101, 102, 115 and 215 only when specified as a degree requirement
THE	All THE courses in this catalog
WST*	All WST courses in this catalog *see AAS Elective Notes

• Mathematics:

MAT*	103, 107, 120, 121, 122, 123,125, 135, 155, 156, 201, 202, 203, 255, 265 * 103 and 099 only when specified as a degree requirement

• Science:

AST	All AST courses in this catalog
BIO	All BIO courses in this catalog
CHE	All CHE courses in this catalog
GEO*	111, 112 * see AAS Electives Notes
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 Science:*

ANT	All ANT courses in this catalog
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	100
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 * see AAS Electives Notes

* AAS Electives Notes:

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

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

3. GEO 111, 112 may be used to fulfill a physical and life science or social and behavioral science requirement, but not both.

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
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

General Education Development:

GED	All courses

Mathematics:

MAT 030	Fundamentals of Mathematics
MAT 060	Pre-Algebra
MAT 090	Introductory 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 upgrading.

Programs Available by Campus

BC = Boulder County Campus

L = Larimer Campus

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.

Associate Degrees

Associate of Arts

Areas of Emphasis:

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

Subject areas include:

Arts and Humanities: ART, FRE, GER, HUM, ITA, LIT, MUS, PHI, RUS, SPA, THE, WST

Communications: COM, ENG, JOU

Social and Behavioral Sciences: ANT, ECO, ETH, GEO, HIS, POS, PSY, SOC, WST

Associate of General Studies

Area of Concentration:

Criminal Justice Studies (CRJ)	W, L
No Specified Area of Concentration	BC, L, W

Associate of Science

Subject areas include:

Biological Science: BIO

Computer Science: CSC

Mathematics: MAT

Physical Science: AST, CHE, GEY, MET, PHY

Associate of Applied Science

Accounting (ACC)	BC, L, W, OL
Animal Laboratory Technology	L
Applied Technology	BC, L, W
Architectural Engineering and Construction Technology (AEC)	L, W

Areas of Concentration:

Architectural Engineering Technology	L, W
Building Construction Management	L, W
Automotive Technology (ASE)	L, W
Building Constructions Management (BCM)	L, W
Business (BUS)	BC, L, W

Areas of Concentration:

Accounting	BC, L, W, OL
Business Specialization	L, W
International Business	BC, L, W
Management	BC, L, W
Marketing	BC, L, W
Small Business Management	BC, L, W
Civil Engineering Technology (CVLE)	L, W
Clean Energy Technology	L

Areas of Concentration:

Electronics/Electrical	L
Mechanical	L
Power Technology	L
Computer-Aided Drafting & Design (CAD)	L, W
Computer Information Systems (CIS)	BC, L, W, OL

Areas of Concentration:

Individualized Area of Concentration	BC, L, W
Microsoft Network Administration	BC, L, W
Programming	BC, L, W
Small Office/Help Desk Specialist	BC, L, W
Web Developer	BC, L, W
Childhood Education (Early ECE)	BC, L, W
Forestry, Wildlife and Natural Resources (AQT) (GIS) (NRE)	L
Health Information Technologies	W
Heating, Ventilation and Air Conditioning (HVA)	L
Horticulture and Landscape Technologies (HLT)	L, W
Hospitality Food Management (HOS)	L
Interior Design (IND)	L
Interpreter Preparation (IPP)	W
Machining Technology (MAC)	L

Areas of Concentration:

Computer Numerical Control	L
Manual Machining	L
Masonry Arts	W
Medical Office Technology (MOT)	BC

Areas of Concentration:

Billing Specialist	BC
Medical Administrative Assisting	BC
Medical Assisting	BC
Multimedia Technology (MGD)	BC, L, W

Areas of Concentration:

Animation	W
Print and Presentation	W
Video	W
Web Media	W
Nursing (NUR)	BC, L, W
Paralegal Studies (PAR)	BC, OL
Paramedic (PRM)	W
Structural Engineering Technology (SET)	W
Veterinary Technology (VET)	L
Welding Technology (WEL)	L,W

Certificates Available by Campus

BC = Boulder County Campus

L = Larimer Campus

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.

Certificates

Accounting (ACC) Certificate	BC, L, W, OL
Enrolled Agent	BC, L, W, OL
Animal Laboratory Technology	
Basic Laboratory Animal Care	L
Laboratory Animal Care and Management	L
Architectural Engineering and Construction Technology (AEC) Certificates	
Architectural Drafting	L, W
Building Electrical/Mechanical Drafting	L, W
Structural Drafting	L, W
Automotive Technology (ASE) Certificates	
Advanced Drivability Diagnosis	W
Automatic Transmission/Axle	L, W
Brakes	L, W
Electrical/Electronic Systems	L, W
Engine Performance	L, W
Engine Repair	L, W
Heating and Air Conditioning	L, W
Manual Drivetrain and Axles	L, W
Suspension and Steering	L, W
Business Certificates (BUS)	
Business Specialization	BC, L, W
International Business Basics	BC, L, W
Management Basics	BC, L, W, OL
Marketing Basics	BC, L, W, OL
Small Business Management Basics	BC, L, W, OL

Clean Energy Technology	
Clean Energy Technology Core	L
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
Basic Mechanical CAD	L, W
Civil CAD	L, W
Landscape CAD Technician	L, W
Computer Information Systems (CIS) (CNG) Certificates	
Applications Specialist	BC, L, W, OL
Computer Technician: A+	BC, L, W
Computer Technician: Network+	BC, L, W
Microsoft Network Administration	BC, L, W
Programming	BC, L, W, OL
Web Authoring	BC, L, W, OL
Web Developer	BC, L, W
Dental Assisting (DEA) Certificate	L
Early Childhood (ECE) Certificates	
Child Development Associate (CDA)	BC, L, W
Director	BC, L, W
Group Leader	BC, L, W
Infant-Toddler Nursery Supervisor	BC, L, W
Paraprofessional in the Inclusive Classroom	L, W
Emergency Medical Services (EMT) Certificates	
Emergency Medical Technician-Basic	BC, L, W
Pre-Paramedic	BC, L, 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, and Air Conditioning (HVA)	

Certificates

Light Commercial Air Conditioning and Heating	L
Residential Air Conditioning and Heating	L
Commercial Refrigeration	L

Holistic Health (HHP) Certificates

Holistic Health	L
Aromatherapy	L

Horticulture and Landscape Technologies (HLT) Certificates

Floral Design	L
Horticulture	L, W
Irrigation Management	W
Landscape Construction and Management	L, W
Landscape Maintainance Technician	L, W
Landscape Design	L, W
Nursery, Greenhouse and Garden Center Management	L, W
Turfgrass Management	L, W

Hospitality/Food Management (HOS) Certificates

Advanced Culinary Arts	L
Beginning Culinary Arts	L
Hospitality Supervision	L
Hotel Operations	L
Restaurant Operations	L, W

Interior Design (IND) Certificates

Fundamentals of Interior Design	L
Kitchen & Bath Design	L

Machining Technology (MAC) Certificates (Closed to New Students)

CNC Lathe Operator	L
CNC Mill Operator	L
Lathe Operator	L
Mill Operator	L

Masonry (MAA) Certificate ....

Masonry	W

Medical Office Technology (MOT) Certificates

Billing Specialist	BC
Clinical Office Assistant	BC
Health Care Office Assistant	BC
Medical Administrative Assistant	BC
Medical Assistant	BC
Medical Transcriptionist	BC

Multimedia Technology (MGD) Certificates

Animation	W
Digital Imaging	L

Graphic Design Technician	L, W
Multimedia General	W
Multimedia Print/Presentation	W
Multimedia Video	W
Multimedia Web	W
Nurse Aide (NUA)	**BC, L, W**
Practical Nursing Certificate	**BC**

Paraeducator (ECE) Certificates

Bilingual Education for Paraeducators	BC, L, W
Early Childhood Education for Paraeducators	BC, L, W
Foundations for Paraeducators	BC, L, W
General Education for Paraeducators	BC, L, W
Technology for Paraeducators	BC, L, W

Paralegal Studies (PAR) Certificates

Legal Assistant	BC, OL
Pharmacy Technician (PHT) Certificate	W

Phlebotomy Certificate	**L**

Teaching English as a Second Language (TEL) Certificates

Teaching English as a Second Language Abroad (TESL-A)	BC
Teaching English as a Second Language K-12 (TESL-K)	BC

Welding Technology (WEL) Certificates

Comprehensive Welding	L
Gas Metal Arc Welding (MIG)	L
Gas Tungsten Arc Welding (TIG)	L
Oxyacetylene Welding	L
Pipe Code Welding	L
Sculptural Welding	L
Shielded Metal Arc Welding	L
Welding Fundamentals	L

Degrees and Certificates

Accounting - Associate of Applied Science Degree

Code: F_AAS_ACC2
Campus: Boulder County, Larimer and Westminster

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.

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

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 090 (or above), and REA 090 (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.

Explanation of */**/*** follows the certificate requirements.

REQUIRED COURSES	CREDITS
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 245 Computerized Accounting with a Professional Package	3
ACC 289 Capstone: Company Financial Overview *or ACC 280 Accounting Internship*	1
Total Required Credits	**18**

REQUIRED ELECTIVE COURSES	CREDITS
Select 6 credits from the following: (must be approved by accounting advisor)	
ACC 115 Payroll Accounting	3
ACC 131 Income Tax	3
ACC 211 Intermediate Accounting I	4
ACC 212 Intermediate Accounting II	4
ACC 216 Government and Not-for-Profit	3
ACC 226 Cost Accounting	3
ACC 231 Business Tax	3
ACC 255 VITA Volunteer Income Tax Assistance	3
ACC 294 Service Learning	3
Total Elective Credits	**6**

REQUIRED BUSINESS SUPPORT COURSES	CREDITS
BUS 217 Business Communication and Report Writing	3
CIS 135 Complete PC Word Processing: WORD	3
CIS 155* PC Spreadsheet Concepts: Excel	3
Elective Business Courses */**/***	12
Total Required Business Support Credits	**21**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 121 English Composition I *or ENG 131 Technical Writing I or ENG 110 English Usage and Grammar*	3
MAT 107 Career Mathematics *or higher MAT course*	3
Arts and Humanities Elective***	3
Science Elective***	3
Social Science Elective***	3
Total Required General Education Credits	**15**
Total Required Credits for AAS Degree	**60**

Accounting - Certificate

Code: F_CER_ACC2
Campus: Boulder County, Larimer and Westminster

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.   Explanation of * follows the certificate requirements.

REQUIRED COURSES	CREDITS
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
Total Required Credits	**22**

REQUIRED ELECTIVE COURSES	CREDITS
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 226 Cost Accounting	3
ACC 255 VITA - Volunteer Income Tax Assistance	3
BUS 216 Legal Environment of Business	3

CIS 145 Complete PC Database: ACCESS	3
Total Required Credits for Certificate	**25**

Notes:

* 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 a business elective course.

** Elective business courses (ACC, BUS, CIS, ECO, MAN, MAR) must be taken as needed to meet the 60 credit hours minimum for the degree. These courses must be ACC, BUS, CIS, ECO, MAN or MAR courses, with prior approval from an accounting faculty advisor. In addition, general education electives must be selected from the Approved Course Lst 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.

Accounting - Enrolled Agent Certificate

Code: F_CER_ENRA
Campus: Boulder County, Larimer and Westminster

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.

REQUIRED COURSES	CREDITS
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 265 Enrolled Agent Review Course	3
PHI 205 Business Ethics	3
Total Required Credits for Certificate	**26**

Accounting Transfer

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 121Accounting Principles I and 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 counselor before declaring a major and before selecting accounting or business courses.

Animal Laboratory Technology - Associate of Applied Science

Code: F_AAS_ATYZ
Campus: Larimer

This two-year 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, program director 970-204-8415, or Sharon Robinson, dean of instruction, Larimer Campus 970-204-8239.

REQUIRED COURSES	CREDITS
ALT 126 Introduction to Lab Animal Science	3
ALT 226 Animal Care and Management	3
ALT 280 Lab Animal Internship	2
BIO 111 General College Biology I with Lab	5
BIO 115 Human Genetics	3
COM 115 Public Speaking	3
ECO 202 Principles of Microeconomics	3
VET 116 Humane Treatment and Handling of Animals	3
VET 205 Veterinary Anatomy and Physiology I	4
VET 227 Animal Nutrition	2
VET 241 Clinical Laboratory Procedures	4
Total Required Credits	**35**

REQUIRED ELECTIVE COURSES	CREDITS
Select 1 of the following:	
ETH 224 Introduction to Chicano Studies	
HIS 101 Western Civilization: Antiquity to 1650	
HIS 111 The World: Antiquity to 1500	
LIT 201 Masterpieces of Literature I	
LIT 202 Masterpieces of Literature II	
POS 205 International Relations or POS 225 Comparative Government	
POS 215 Current Political Issues	
Total Elective Credits	**3**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
Arts & Humanities:	
Select any 2 approved Arts & Humanities GT electives for 6 credit hours. (2 courses from 2 different categories - AH1, AH2, AH3 or AH4).	6

English:

ENG 122 English Composition II	3

Math :

MAT 121 College Algebra (4 credits hours) and MAT 135 Introduction to Statistics (3 credit hours)	7

Science:

CHE 105 Chemistry in Context (5 credit hours) or CHE 101 Introduction to Chemistry I (5 cr. hrs) or CHE 111 General College Chemistry I (5 cr. hrs.)	5

Other:

Select 1 of the following:	3
ANT 107 Introduction to Archaeology	
HIS 102 Western Civilization: 1650 to Present	
HIS 112 The World: 1500 to Present	
or HIS 208 American Indian History	
HIS 201 U.S. History to the Reconstruction	
HIS 202 U.S. History since the Civil War	
Total Required General Education Credits	**24**
Total Required Credits for AAS Degree	**62**

Basic Laboratory Animal Care - Certificate

Code: F_CER_BLAC
Campus: Larimer

REQUIRED COURSES	CREDITS
ALT 126 Introduction to Lab Animal Science	3
HPR 178 Seminar: Medical Terminology	2
VET 116 Humane Treatment and Handling of Animals	3
Total Required Credits	**8**

Laboratory Animal Care and Management - Certificate

Code: F_CER_LACM
Campus: Larimer

REQUIRED COURSES	CREDITS
ALT 226 Animal Care and Management	3
VET 205 Veterinary Anatomy & Physiology I	4
VET 227 Animal Nutrition	2
VET 241 Clinical Laboratory Procedures	4
Total Required Credits	**13**

Applied Technology - Associate of Applied Science Degree

Code: F_AAS_APT1
Campus: Boulder County, Larimer and Westminster

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 four Area Vocational Technical Schools (AVTS). The four AVTS are: Delta-Montrose Area Vocational Technical Center, Emily Griffith Opportunity School, San Juan Basin Technical College, and Pickens Tech Center.

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 AVTS 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 AVTS is credited to the student's transcript upon completion of the requirements of both institutions. Students may enroll concurrently at both an AVTS and a community college. Students must comply with the regulations and requirements relating to admission and attendance at each institution.

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 AVTS. If the AVTS 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	CREDITS
Select from the Approved General Education Electives List for the AAS degree.	
English/Speech Communications	3
Humanities	3
Mathematics	3
Natural Science	3
Social Science	3
Total Required General Education Credits	**15**
Total Required AVTS Credits	**45**
Total Required Credits for AAS Degree	**60**

Architectural Engineering and Construction Technology

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 099 (or above), and REA 090 (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 Mr. Joe Wujek at 303-404-5361 or email joe.wujek@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 Engineering Technology - Associate of Applied Science Degree

Code: F_AAS_ARC
Campus: Larimer and Westminster

This degree is a comprehensive two-year study in architectural drafting, elementary design and engineering principles. It prepares students for employment in the following areas: architectural CAD drafting technician and engineering technician.

REQUIRED COURSES	CREDITS
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 205 Applied Statics and Strengths of Materials	3
AEC 206 Applied Structural Analysis	3
AEC 208 Building Electrical Systems	2
AEC 210 Building Mechanical Systems	4
AEC 215 Elementary Site Planning	3
AEC 218 Sustainable Building Systems	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CIS 118 Introduction to PC Applications	3
Total Required Credits	**47**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ART 121 Drawing I	3
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 121 College Algebra	4
MAT 122 College Trigonometry	3
(or an advisor-approved MAT course)	
PHY 105* Conceptual Physics	4
Total Required General Education Credits	**17**
Total Required Credits for AAS Degree	**64**

*Note: * 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.*

Building Construction Management - Associate of Applied Science Degree

Code: F_AAS_BCM
Campus: Larimer and Westminster

This degree is a comprehensive two-year study in building construction and project management. Graduates of the program qualify for paraprofessional employment in the construction industry.

REQUIRED COURSES	CREDITS
ACC 101 Fundamentals of Accounting	3

	CREDITS
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 131 Estimating I: Quantity Survey	3
AEC 205 Applied Statics and Strengths of Materials	3
AEC 206 Applied Structural Analysis	3
AEC 215 Elementary Site Planning	3
AEC 221 Building Electrical/Mechanical Systems	3
AEC 231 Estimating II: Cost Analysis	3
AEC 232 Construction Project Management	3
AEC 233 Construction Safety and Loss Prevention	2
AEC 234 Construction Contract and Labor Law	2
CIS 118 Introduction to PC Applications	3
MAN 116 Principles of Supervision	3
Total Required Credits	**47**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 121 College Algebra	4
MAT 122 College Trigonometry	3
(or an advisor-approved MAT course)	
PHY 105 Conceptual Physics	4
SOC 101 Introduction to Sociology I	3
Total Required General Education Credits	**17**
Total Required Credits for AAS Degree	**64**

Civil Engineering Technology - Associate of Applied Science Degree

Code: F_AAS_CVLE
Campus: Westminster

This degree is a comprehensive two-year study in civil engineering principles.

REQUIRED COURSES	CREDITS
AEC 101 Basic Architectural Drafting	4
AEC 102 Residential Construction Drawings or AEC 123 Commercial Construction Drawings	4
AEC 103 Computer Applications in AEC or CIS 118 Introduction to Computer Applications	3
AEC 121 Construction Materials and Systems	3
AEC 122 Construction Practices and Documents	2
AEC 141 Civil Construction Materials	5
AEC 205 Applied Statics and Strengths of Materials	3
AEC 206 Applied Structural Analysis	3
AEC 215 Elementary Site Planning	3
AEC 223 Civil Construction Systems	3
AEC 224 Civil Water/Environmental Systems	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 231 Land Desktop/Autodesk	3
Total Required Credits	**45**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ART 121 Drawing I	3
ENG 121 English Composition I (3 credits) and ENG 131 Technical Writing (3 credits)	6
COM 115 Public Speaking	3
MAT 121 College Algebra	4
MAT 122 College Trigonometry	3
(or an advisor-approved MAT course)	
PHY 111 Physics - Algebra Based I with Lab	5
Total Required General Education Credits	24
Total Required Credits for AAS Degree	**69**

Structural Engineering Technology - Associate of Applied Science Degree

Code: F_AAS_STET   Campus: Westminster

A comprehensive two-year course of study in architectural and structural drafting/detailing and elementary design and engineering principles. It prepares the student for employment as a CAD drafter/detailer or engineering technician who work in steel structural engineering firms, construction companies, governmental entities, large corporations, and manufacturers/suppliers of building products. This program was developed with input from members of the Rocky Mountain Steel Construction Association Inc.

REQUIRED COURSES	CREDITS
AEC 101 Basic Architectural Drafting	4
AEC 102 Residential Construction Drawings	4
AEC 103 Computer Applications in AEC	3
or CIS 118 Introduction to PC Applications	
AEC 121 Construction Materials and Systems	3
AEC 122 Construction Practices and Documents	2
AEC 123 Commercial Construction Drawing	4
AEC 206 Applied Structural Analysis	3
AEC 221 Building Electrical/Mechanical Systems	3
AEC 241 Introductory Steel Detailing	3
AEC 242 Advanced Steel Detailing	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 202 Computer-Aided Drafting/3D	3
or AEC 243 Computerized Steel Detailing	
TEC 210 Applied Statics & Strengths or Materials	3
Total Required Technical Credits	44
ART 121 Drawing I	3
ENG 121 English Composition I	3
ENG 131 Technical Writing I	3
MAT 121 College Algebra	4
MAT 122 College Trigonometry	3
PHY 111 Physics: Algebra-Based I with Lab	5
COM 115 Public Speaking	3
Total Required General Education Credits	24
Total Required Credits for AAS Degree	**68**

Architectural Engineering and Construction Technology - Certificates

Architectural Drafting Certificate

Code: F_CER_DRA1
Campus: Larimer and Westminster

This certificate provides students with entry-level drafting and CAD skills.

REQUIRED COURSES	CREDITS
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 202 Computer-Aided Drafting/3D	3
(or CAD 224 REVIT)	
CIS 118 Introduction to PC Applications	3
Total Required Credits	29
REQUIRED GENERAL EDUCATION COURSES	CREDITS
ART 121 Drawing I	3
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 099 Intermediate Algebra	4
(or MAT 121 College Algebra)	
Total Required General Education Credits	10
Total Required Credits for Certificate	**39**

Building Electrical/Mechanical Drafting Certificate

Code: (F_CER_ATEB
Campus: Larimer and Westminster

This certificate provides students with skills in the following areas: drafting, detailing and CAD with a concentration in heating, ventilating, air conditioning, plumbing, lighting and electrical distribution systems in buildings.

REQUIRED COURSES	CREDITS
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 208 Building Electrical Systems	2
AEC 210 Building Mechanical Systems	4
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 202 Computer-Aided Drafting/3D	3
(or CAD 224 REVIT)	
CIS 118 Introduction to PC Applications	3
Total Required Credits	35
REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 121 English Composition I	3

(or ENG 131 Technical Writing I)	
MAT 121 College Algebra	4
Total Required General Education Credits	**7**
Total Required Credits for Certificate	**42**

Structural Drafting Certificate

Code: F_CER_ATES
Campus: Larimer and Westminster

This certificate provides students with skills in structural drafting, detailing and CAD as related to steel, concrete and timber building structures.

REQUIRED COURSES	CREDITS
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 205 Applied Statics and Strengths of Materials	3
AEC 206 Applied Structural Analysis	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 202 Computer-Aided Drafting/3D	3
(or CAD 224 REVIT)	
CIS 118 Introduction to PC Applications	3
Total Required Credits	**35**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ART 121 Drawing I	3
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 121 College Algebra	4
Total Required General Education Credits	**10**
Total Required Credits for Certificate	**45**

Automotive Technology - Associate of Applied Science Degree

Code: F_AAS_AUT
Campus: Larimer and Westminster

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 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.

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 ENG 090 (or above), MAT 090 (or above), and REA 090 (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.

REQUIRED COURSES	CREDITS
ASE 101 Automotive Orientation	2
ASE 110 Brakes I	3
ASE 120 Basic Automotive Electricity	2
ASE 123 Automotive Battery, Starting, and Charging Systems	2
ASE 130 General Engine Diagnosis	2
ASE 132 Ignition System Diagnosis and Repair	2
ASE 134 Automotive Emissions	2
ASE 140 Suspension and Steering I	3
ASE 150 Automotive U-Joint and Axle Shaft Service	2
ASE 151 Automotive Manual Transmission/Transaxles and Clutches	2
ASE 152 Differentials and 4WD/AWD Service	2
ASE 161 Engine, Disassembly Diagnosis and Assembly	5
ASE 210 Brakes II	3
ASE 221 Automotive Body Electrical	4
ASE 231 Automotive Computers	2
ASE 233 Fuel Injection and Exhaust Systems	4
ASE 240 Suspension and Steering II	3
ASE 251 Automatic Transmission/Transaxle Diagnosis and Assemblies	5
ASE 265 Automotive Heating and Air Conditioning	5
MTE 110 Manufacturing Communication and Teamwork	3
or	
the following 3 courses at Westminster only:	1
ASE 160 Automotive Engine Removal and Installation	
and	
ASE 235 Drivability Diagnosis	1
and	
ASE 250 Automotive Transmission/Transaxle	1
Total Required Credits	**58**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 131 Technical Writing I	3
MAT 107 Career Mathematics	3
PHY 105 Conceptual Physics	4
Social Science or Arts and Humanities Elective*	3
General Studies Elective*	3
Total Required General Education Credits	**16**
Total Required Credits for AAS degree	**74**

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.

* Electives must be selected from the Approved General Education Electives List for the AAS degree.

Automotive Technology - Certificates

Advanced Drivability Diagnosis Certificate

Code: F_CER_AADD
Campus: Westminster

REQUIRED COURSES	CREDITS
ASE 236 Advanced Drivability Diagnosis/Repair	4
ASE 252 Advanced Automatic Transmissions/Transaxles	2
Total Required Credits for Certificate	**6**

Automatic Transmission/Transaxle Certificate

Code: F_CER_AAUT
Campus: Larimer and Westminster

REQUIRED COURSES	CREDITS
ASE 101 Auto Shop Orientation	2
ASE 150 Automotive U-Joint and Axle Shaft Service	2
ASE 152 Differentials and 4WD/AWD Service	2
ASE 250 Automatic Transmission/Transaxle Service	1
or elective credit with program advisor approval	1
ASE 251 Automatic Transmission/Transaxle Diagnosis and Assemblies	5
Total Required Credits for Certificate	**12**

Brakes Certificate

Code: F_CER_AUB
Campus: Larimer and Westminster

REQUIRED COURSES	CREDITS
ASE 101 Auto Shop Orientation	2
ASE 110 Brakes I	3
ASE 210 Brakes II	3
Total Required Credits for Certificate	**8**

Electrical/Electronic Systems Certificate

Code: F_CER_AAEE
Campus: Larimer and Westminster

REQUIRED COURSES	CREDITS
ASE 101 Auto Shop Orientation	2
ASE 120 Basic Automotive Electricity	2
ASE 123 Automotive Battery, Starting and Charging Systems	2
ASE 132 Ignition System Diagnosis and Repair	2
ASE 221 Automotive Body Electrical	4
ASE 231 Automotive Computers	2
Total Required Credits for Certificate	**14**

Engine Performance Certificate

Code: F_CER_AUTP
Campus: Larimer and Westminster

REQUIRED COURSES	CREDITS
ASE 101 Auto Shop Orientation	2
ASE 120 Basic Automotive Electricity	2
ASE 130 General Engine Diagnosis	2
ASE 132 Ignition System Diagnosis and Repair	2
ASE 134 Automotive Emissions	2
ASE 233 Fuel Injection and Exhaust Systems	4
ASE 235 Drivability Diagnosis	1
or elective credit with program advisor approval	1
Total Required Credits for Certificate	**15**

Engine Repair Certificate

Code: F_CER_AER
Campus: Larimer and Westminster

REQUIRED COURSES	CREDITS
ASE 101 Auto Shop Orientation	2
ASE 130 General Engine Diagnosis	2
ASE 160 Automotive Engine Removal and Installation	1
or elective credit with program advisor approval	1
ASE 161 Engine Disassembly, Diagnosis and Assembly	5
Total Required Credits for Certificate	**10**

Heating and Air Conditioning Certificate

Code: F_CER_ATAC
Campus: Larimer and Westminster

REQUIRED COURSES	CREDITS
ASE 101 Auto Shop Orientation	2
ASE 120 Basic Automotive Electricity	2
ASE 265 Automotive Heating and Air Conditioning	5
Total Required Credits for Certificate	**9**

Manual Drivetrain and Axles

Code: F_CER_AUTW
Campus: Larimer and Westminster

REQUIRED COURSES	CREDITS
ASE 101 Auto Shop Orientation	2
ASE 150 Automotive U-Joint and Axle Shaft Service	2
ASE 151 Automotive Manual Transmission/Transaxle and Clutches	2
ASE 152 Differentials and 4WD/AWD Service	2
Total Required Credits for Certificate	**8**

Suspension and Steering

Code: F_CER_AUTS
Campus: Larimer and Westminster

REQUIRED COURSES	CREDITS
ASE 101 Auto Shop Orientation	2
ASE 140 Suspension and Steering I	3
ASE 240 Suspension and Steering II	3
Total Required Credits for Certificate	**8**

Business - Associate of Applied Science Degree

Code: F_AAS_BUS3
Campus: Boulder County, Larimer and Westminster

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 required to meet with a business program advisor to develop an educational plan BEFORE completing any business elective courses.)

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

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 099 (or above), and REA 090 (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 MAJOR COURSES	CREDITS
ACC 121 Principles of Accounting 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 (final semester)	2
MAN 226 Principles of Management	3
MAR 216 Principles of Marketing	3
Electives: CIS	3
Electives: ACC, BUS, CIS, CSC, CNG, CWB, FIN, MAN, MAR (Faculty advisor approval required before course enrollment)	18
Total Required Major Credits	**45**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ECO 201 Principles of Macroeconomics	3
(or ECO 202 Principles of Microeconomics)	
ENG 121 English Composition I	3
(or ENG 131 Technical Writing)	
MAT 121 College Algebra (GT-MA1)	4
PHI 205 Business Ethics	3
Science Elective **	3
Total Required General Education Credits	**16**
Total Required Credits for AAS Degree	**61**

*Note: ** Electives must be selected from the Approved General Education Electives List for the AAS degree.*

Business - Certificates

Business Specialization Certificate

Code: F_CER_BSPC
Campus: Boulder County, Larimer and Westminster

Students may develop a specialized certificate by working with a program advisor. This certificate is targeted at specific business categories and courses must be selected from the following prefixes: ACC, BUS, CIS/CSC/CNG/CWB, MAN, MAR or FIN.   Department or Dean approval is required.

Total Required Credits for Certificate   9

International Business Basics Certificate

Code: F_CER_BIBB
Campus: Boulder County, Larimer and   Westminster

This certificate program is designed for individuals who seek to develop and improve skills in international business.

REQUIRED COURSES	CREDITS
BUS 115 Introduction to Business	3
BUS 203 Introduction to International Business	3
MAR 240 International Marketing	3
Total Required Credits for Certificate	**9**

Management Basics Certificate

Code: F_CER_BMMB
Campus: Boulder County, Larimer, Westminster and Online

This certificate program is designed for individuals who seek to develop and improve their business management skills.

REQUIRED COURSES	CREDITS
BUS 115 Introduction to Business	3
BUS 217 Business Communication and Report Writing	3
MAN 226 Principles of Management	3
Total Required Credits for Certificate	**9**

Marketing Basics Certificate

Code: F_CER_MMB
Campus: Boulder County, Larimer, Westminster and Online

This certificate program prepares students to perform marketing, administration or support functions in organizations related to promotion, sales, public relations, retailing or advertising operations.

REQUIRED COURSES	CREDITS
MAR 111 Principles of Sales	3
MAR 216 Principles of Marketing	3
MAR 220 Principles of Advertising	3
Total Required Credits for Certificate	**9**

Small Business Management Basics Certificate

Code: F_CER_BSBM
Campus: Boulder County, Larimer, Westminster and Online

This certificate program prepares students for the entrepreneurial challenge of starting and operating a business effectively.

REQUIRED COURSES	CREDITS
BUS 115 Introduction to Business	3
MAN 216 Small Business Management	3
MAR 216 Principles of Marketing	3
Total Required Credits for Certificate	**9**

Business for Transfer - Associate of Arts Degree

Code: F_AA_AA,BSTR
Campus: Boulder County, Larimer and Westminster

This program is designed for students intending to transfer into a four-year college or university with the degree in business.

REQUIRED BUSINESS COURSES	CREDITS
ACC 121 Principles of Accounting I	4
ACC 122 Principles of Accounting 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
Total Required Business Credits	*20*

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ECO 201 Principles of Macroeconomics (GT-SS1)	3
ECO 202 Principles of Microeconomics (GT-SS1)	3
ENG 121 English Composition I (GT-CO1)	3
ENG 122 English Composition II (GT-CO2)	3
MAT 121 College Algebra (GT-MA1) (or MAT 123 Finite Mathematics)	4
MAT 125 Survey of Calculus (GT-MA1) (or higher calculus courses MAT 201, MAT 202, MAT 203, MAT 204)	4
COM 115 Public Speaking	3
Arts and Humanities** (courses must be from 2 different GT categories: AH1, AH2, AH3, AH4)	6
History**	3
Science**	8
Total Required General Education Credits	*40*
Total Required Credits for AA Degree	**60**

*Note: **Courses must be selected from the State Guaranteed Transfer Course List. Credit earned through prior learning, Advanced Placement, International Baccalaureate, articulation, military, corporate, challenge exam, portfolio credit, substations, independent study, correspondence courses, CLEP and other tested-only credit may not apply and will invalidate the guaranteed transfer of AA and AS degrees. The institution to which a student transfers will evaluate these credits according to its own policies.*

Clean Energy Technology - Associate of Applied Science Degree

Code: F_AAS_CLET
Campus: Larimer

The focus of this program is to prepare individuals for entry-level work in the growing clean energy industry. 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 providing a sound foundation in the basic skills that apply to the broad range of industries in the region. Skills include Clean Energy and Manufacturing Fundamentals, Safety, Engineering Materials, AC/DC Fundamentals, Metrology and Digital Devices. Year two will provide students

with the option of selecting one of three pathways: Electronics/Electrical, Mechanical or Power Generation and Transmission.

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

For more information, contact the office of Integrated Technology, Larimer Campus, 970-204-8279, or the Advising, Career & Counseling Center at 970-204-8305 or LC.Advising@frontrange.edu.

AAS Degree with Electro/Mechanical Concentration

REQUIRED CORE COURSES	CREDITS
ELT 106 Fundamentals of DC/AC	3
ELT 147 Digital Devices I	3
ENT 105 Safety for Manufacturing Environment	1
ENT 106 Print Reading for Manufacturing	3
ENT 110 Metrology	3
ENT 120 Methods of Statistical Process Control	2
ENY 160 Manufacturing & Energy	3
TEC 201 Engineering Materials	3
Total Required Credits	*21*

ELECTRO/MECHANICAL CONCENTRATION	
ELT 107 Fundamentals of Industrial Electronics	3
ELT 205 Electronic Troubleshooting I	3
ELT 258 Programmable Logic Controllers	3
ENT 177 Machine Tools	3
ENT 238 Industrial Fluid Power & Controls	3
MTE 244 Lean Manufacturing	3
ENY 275 Wind Energy & Photovoltaic Systems	3
MTE 110 Manufacturing Communication & Teamwork	3
ENY 280 Internship OR ENT 289 Engineering Technology Capstone	1
Total Credits for Concentration	*25*

REQUIRED GENERAL EDUCATION COURSES	CREDITS
CIS 118 Computer Applications	3
ENG 115 Technical English & Communication	3
MAT 108 Technical Mathematics	4
PHI 112 Ethics	3
PHY 105 Conceptual Physics	4
Social Science Elective	3
Possibilities include courses	
(each are 3 credit hours) such as:	
ECO 201 Principles of Macroeconomics	
ECO 202 Principles of Microeconomics	
HIS 201 U.S. History I	
POS 111 American Government	
PSY 101 General Psychology I	
Total Required General Education Credits	*20*
Total Required Credits for AAS Degree	**66**

with Electro/Mechanical Concentration

AAS Degree with Power Technology Concentration

REQUIRED CORE COURSES	CREDITS
ELT 106 Fundamentals of DC/AC	3
ELT 147 Digital Devices I	3
ENT 105 Safety for Manufacturing Environment	1
ENT 106 Print Reading for Manufacturing	3
ENT 110 Metrology	3
ENT 120 Methods of Statistical Process Control	2
ENY 160 Manufacturing & Energy	3
TEC 201 Engineering Materials	3
Total Required Credits	*21*

POWER TECHNOLOGY CONCENTRATION	
PPT 105 Basic Plant Operation	2
PPT 116 Instrumentation and Control	3
PPT 210 Steam Turbines	3
PPT 215 Power Generation	3
PPT 275 Substations & Transformers	3
PPT 276 Interconnected System Operations	3
ENY 275 Wind Energy & Photovoltaics Systems	3
ENY 280 Internship OR	1
ENT 289 Engineering Technology Capstone	
MTE 110 Manufacturing Communication & Teamwork	3
Total Credits for Concentration	*24*

REQUIRED GENERAL EDUCATION COURSES	CREDITS
CIS 118 Computer Applications	3
ENG 115 Technical English & Communication	3
MAT 108 Technical Mathematics	4
PHI 112 Ethics	3
PHY 105 Conceptual Physics	4
Social Science Elective	3
Possibilities include courses	
(each are 3 credit hours) such as:	
ECO 201 Principles of Macroeconomics	
ECO 202 Principles of Microeconomics	
HIS 201 U.S. History I	
POS 111 American Government	
PSY 101 General Psychology I	
Total Required General Education Credits	*20*
Total Required Credits for AAS Degree with Power Technology Concentration	**65**

Clean Energy Technology Certificate

Code: F_CER_CLET
Campus: Larimer

REQUIRED PROGRAM COURSES	CREDITS
ELT 106 Fundamentals of DC/AC	3
ELT 147 Digital Devices I	3
ENT 105 Safety for Manufacturing Environment	1
ENT 106 Print Reading for Manufacturing	3
ENT 110 Metrology	3
ENT 120 Methods of SPC	2
ENY 160 Manufacturing and Energy	3
TEC 201 Engineering Materials	3
Total Required Credits	*21*

GENERAL EDUCATION REQUIRED COURSES	CREDITS
ENG 115 Technical English & Communication	3
MAT 108 Technical Mathematics	4
PHY 105 Conceptual Physics	4
CIS 118 Computer Applications	3
Total Required General Education Credits	*14*
Total Required Credits for Certificate	**35**

Computer-Aided Drafting and Design - Associate of Applied Science Degree

Code: F_AAS_CAD4
Campus: Larimer and Westminster

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 099 (or above), and REA 090 (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 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 courses may not be offered every semester or at every campus. Please work with a program advisor in selection of your courses.

Articulation agreements exist with local secondary and postsecondary career and technical programs. Credit may be granted for previous training and experience.

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

REQUIRED COURSES	CREDITS
CAD 100 Blueprint Reading for Computer Aided Drafting	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 201 Computer-Aided Drafting/Custom	3

CAD 202 Computer-Aided Drafting/3D	3
CAD 219 3D/Max	3
CAD 289 Capstone	3
Required Electives: CIS, MGD	6
Choose one of the following drawing courses:	
AEC 101 Basic Architectural Drafting	4
ENT 131 Mechanical Drawing I	4
ENT 143 Survey Drafting	4
HLT 130 Landscape Graphics Studio	3
Total Required Credits	***31***

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ART 121 Drawing I	3
ENG 131 Technical Writing I	3
MAT 121 College Algebra	4
Science elective from the AAS General Education Electives List	3
Social and Behavioral Sciences elective from the AAS General Education Electives List	3
Total Required General Education Credits	***16***

DRAFTING AND CAD ELECTIVE COURSES:

Students must work with a CAD program advisor in order to select at least 13 credits from among the following courses: (Those appropriate in the student's occupational interests)

AEC 102 Residential Construction Drawing	4
AEC 215 Elementary Site Planning	3
AEC 123 Commercial Construction Drawings	4
CAD 220 3D/Max Advanced	3
CAD 224 REVIT	3
CAD 225 Architectural Desktop/Autodesk	3
CAD 227 Advanced REVIT	3
CAD 231 Land Desktop/Autodesk	3
CAD 233 Civil 3D/Autodesk	3
CAD 240 Inventor I/Autodesk	3
CAD 244 Advanced Inventor	3
CAD 255 Solidworks/Mechanical	3
CAD 259 Advanced Solidworks	3
GIS 101 Intro to Geographic Information Systems	3
HLT 140 Landscape Design & Planning	4
MTE 110 Communication for Teamwork	3
Total Required Elective Credits	***13***
Total Required Credits for AAS Degree	**60**

Computer-Aided Drafting and Design - Certificates

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 ENG 090 (or above) MAT 099 (or above) and REA 090 (or above), may begin this program of study. All courses applied to the certificates must be completed with a grade of "C" or above.

Advanced Architectural Computer-Aided Drafting Certificate

Code: F_CER_CADA
Campus: Larimer and Westminster

See also Architectural Engineering and Construction Technology.

This certificate offers advanced training in CAD for the professional and technician already employed in the field, or for Architectural Engineering and Construction Technology graduates. Documented work experience or completed course work equivalent to that required for the Architectural Drafting certificate is required before entering this program.

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

REQUIRED COURSES	CREDITS
CAD 202 Computer-Aided Drafting/3D	3
CAD 219 3D/MAX	3
CAD 224 REVIT	3
CAD 227 Advanced REVIT	3
CAD 289 Capstone	3
(or AEC 280 Internship or AEC 285 Independent Study)	
Any MGD Course	3
Total Required Credits for Certificate	**18**

Advanced Mechanical CAD Certificate

Code: F_CER_CADX
Campus: Larimer and Westminster

This certificate prepares students to become proficient in the use of advanced mechanical computer-aided drafting with a concentration in Mechanical CAD applications.

REQUIRED COURSES	CREDITS
CAD 201 Computer-Aided Drafting/Custom	3
CAD 219 3D/Max	3
CAD 240 Inventor I/AutoDesk	3
CAD 255 Solidworks/Mechanical	3
CAD 289 Capstone	3
ELECTIVES (CHOOSE 3 Credits)	3
MTE 110 Manufacturing Communication and Teamwork	
CAD 244 Advanced Inventor	
CAD 259 Advanced Solidworks	
ENT 134 Geometric Dimensioning & Tolerance (2 credits) (See Program Advisor)	
MTE 120 Manufacturing Processes	
Total Required Credits for Certificate	**18**

Animation and Visualization CAD Certificate

Code: F_CER_CADV
Campus: Larimer and Westminster

See also Multimedia Technology.

This certificate prepares students to become proficient in the use of computer-aided drafting with a concentration in 3D graphics and animation and visualization applications.

REQUIRED COURSES	CREDITS
CAD 101 Computer-Aided Drafting I	3

CAD 102 Computer-Aided Drafting II	3
CAD 202 Computer-Aided Drafting/3D	3
CAD 219 3D/Max	3
CAD 220 3D/Max Advanced	3
CAD 289 Capstone	3
MGD Electives	3
Total Required Credits for Certificate	**21**

Basic Computer-Aided Drafting and Design Certificate

Code: F_CER_CADN
Campus: Larimer and Westminster

This certificate prepares students to become proficient in the use of computer-aided drafting. To be eligible to receive this certificate, students must have completed two semesters of full-time coursework at an approved post-secondary institution in a drafting related program. In addition, students must demonstrate two years of full-time work experience in drafting.

REQUIRED COURSES	CREDITS
CAD 100 Blueprint Reading for CAD	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 201 Computer-Aided Drafting/Custom	3
CAD 202 Computer-Aided Drafting/3D	3
Total Required Credits for Certificate	**15**

Basic Mechanical CAD Certificate

Code: F_CER_CADM
Campus: Larimer and Westminster

This certificate provides instruction in basic drafting and the use of CAD technology.

REQUIRED COURSES	CREDITS
CAD 100 Blueprint Reading for CAD	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 201 Computer-Aided Drafting/Custom	3
CAD 202 Computer-Aided Drafting/3D	3
ENT 131 Mechanical Drawing I	4
Total Required Credits for Certificate	**19**

Civil CAD Certificate

Code: F_CER_CDV1
Campus: Larimer and Westminster

This certificate prepares students to become proficient in the use of computer-aided drafting with a concentration in Civil CAD applications.

REQUIRED COURSES	CREDITS
ENT 143 Survey Drawing	4
AEC 215 Elementary Site Planning	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 202 Computer-Aided Drafting/3D	3
CAD 233 Civil 3D/Autodesk	3
(or GIS 101 Introduction to Geographic Information Systems)	

CAD 289 Capstone	3
Total Required Credits for Certificate	**22**

Landscape CAD Technician Certificate

Code: F_CER_CADL
Campus: Larimer and Westminster
See also Horticulture and Landscape Technologies.

This certificate integrates instruction in CAD 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.

REQUIRED COURSES	CREDITS
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 202 Computer-Aided Drafting/3D	3
CAD 289 Capstone	3
HLT 130 Landscape Graphics Studio	3
Total Required Credits	*15*

REQUIRED ELECTIVE COURSES	CREDITS
Select an additional 6 credits from the following HLT courses:	
HLT 120 Principles of Xeriscape	2
HLT 140 Landscape Design and Planning	4
HLT 235 Principles of Grading and Drainage	3
HLT 236 Landscape Construction	4
HLT 237 Landscape Bidding and Estimating	2
HLT 250 Landscape Irrigation Design	3
Total Required Credits for Certificate	**21**

Computer Information Systems - Associate of Applied Science Degree

Code: F_AAS_CIS4
Campus: Boulder County, Larimer and Westminster

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 degree offers areas of concentration within the computer information systems discipline. Students may select an area of concentration that best meets their career goals.

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 many required and elective courses. Please see a CIS advisor to determine the availability of such exams.

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

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 099 (or above) and REA 090 (or above), may begin this program of study.

REQUIRED COURSES	CREDITS
CIS 115 Introduction to Computer Information Systems	3

CIS 118 Introduction to PC Applications	3
CIS 128 Windows Complete (or approved CIS, CNG, CSC or CWB elective)	3
Total Required Credits	**9**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 121 College Algebra	4
Arts and Humanities Elective*	3
Science Elective*	3
Social and Behavioral Sciences Elective*	3
Total Required General Education Credits	**16**
Total Required Credits for Area of Concentration	**35**
(see Areas of Concentration below)	
Total Required Credits for AAS Degree	**60**

Note: * Electives must be selected from the Approved General Education Electives List for the AAS degree.

Computer Information Systems - Areas of Concentration

To fulfill the remaining requirements for the CIS degree, students must complete one of the following areas of concentration. Students may consult with a CIS advisor to develop an individualized area of concentration that may best meet their professional needs. Once agreed upon and approved, the individualized area of concentration becomes part of the student's graduation requirements and permanent record. However, the required major and general education courses are not subject to change.

Individualized Area of Concentration

Code: F_AAS_CIS4,CISS
Campus: Boulder County, Larimer and Westminster

In consultation with a CIS program advisor, the student may develop an individualized area of concentration that is more related 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. Once approved, the developed area of concentration becomes part of the student's permanent record and courses must be selected from the following prefixes:

Electives: ACC, BTE, BUS, CIS, CNG, CSC, CWB, MAN, MAR, MGD

Total Required Credits for Concentration	**35**

Microsoft Network Administration

Code: F_AAS_CIS4_CMNA
Campus: Boulder County, Larimer, and Westminster

REQUIRED COURSES	CREDITS
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
CNG 131 Network Security Fundamentals or CNG 217 Implementing Security for Microsoft Networks	3
CNG 211 Windows Configuration	3
CNG 212 Managing a MS Windows Server Environment	4
CNG 213 Implementing a MS Windows Network Infrastructure	4
Electives: (see advisor)	6-7
Total Required Credits for Concentration	**34**

Programming

Code: F_AAS_CIS4, CPGM
Campus: Boulder County, Larimer and Westminster

REQUIRED COURSES	CREDITS
CIS 145 Complete PC Database: Access	3
CSC 160 Computer Science I: C++	4
CSC 161 Computer Science II: C++	4
Total Required Credits	**11**

ADDITIONAL REQUIRED COURSES	CREDITS
Select an additional 9 credits from the following:	
CSC 154 Introduction to Microsoft Visual Basic.net Programming	3
CSC 230 C Programming	3
CSC 233 Object Oriented Programming in C++	3
CSC 240 Java Programming	3
CSC 241 Advanced Java Programming	3
CSC 251 Programming with Microsoft VB.net	3
Total Additional Required Credits	**9**

REQUIRED ELECTIVE COURSES	CREDITS
Select 15 elective credits from the following:	
CIS, CNG, CSC, CWB, MAT 201 or higher	**15**
Total Required Credit for Concentration	**35**

Web Developer

Code: F_AAS_CIS4,DVL
Campus: Boulder County, Larimer and Westminster

REQUIRED COURSES	CREDITS
CIS 145 Complete PC Database: Access	3
CIS 244 PL/SQL	3
CSC 116 Logic and Programming Design	3
CWB 110 Complete Web Authoring	3
CWB 205 Complete Web Scripting (Javascript)	3
CWB 208 Web Application Development (PHP)	3
CWB 289 Capstone (or MGD 289 Capstone)	2
MGD 111 Adobe Photoshop	3
MGD 141 Web Design I (or CWB 130 Complete Web Editing Tools)	3
MGD 143 Motion Graphics Software	3
MGD 241 Web Design II	3
MGD 243 Motion Graphics Software II	3
Total Required Credit for Concentration	**35**

Small Office/Help Desk Specialist

Code: F_AAS_CIS4,CMOH
Campus: Boulder County, Larimer and Westminster

REQUIRED COURSES	CREDITS
ACC 101 Fundamentals of Accounting	3
BUS 115 Introduction to Business	3

BUS 217 Business Communication and Report Writing	3
CIS 135 Complete PC Word Processing: Word	3
CIS 145 Complete PC Database: Access	3
CIS 155 PC Spreadsheet Concepts: Excel	3
CIS 263 PC Help Desk Skills	3
Electives: ACC, BTE, BUS, CIS, CNG, CWB, MAN, MAR, MGD	14
Total Required Credits for Concentration	**35**

Computer Information Systems - Certificates

Applications Specialist Certificate

Code: F_CER_CAPS
Campus: Boulder County, Larimer, Westminster and Online

This certificate is designed to prepare students for entry-level employment positions as data entry and data processing operators using most major types of business applications: word processing, spreadsheets, databases, and presentation graphics.

Program applicants must demonstrate course proficiency or course completion of CIS 128 Windows Complete.

All certificate courses must be completed with a grade of "C" or above.

REQUIRED COURSES	CREDITS
CIS 118 Introduction to PC Applications	3
CIS 135 Complete PC Word Processing: Word	3
CIS 145 Complete PC Database: Access	3
CIS 155 PC Spreadsheet Concepts: Excel	3
Total Required Credits for Certificate	**12**

CISCO Network Associate

Code: F_CER_CNWA
Campus: Boulder County

This certificate is designed to prepare students for entry-level employment in the computer-networking field. It is oriented toward support of a broad range of technical customers who use networking products in business and industry networking applications for the Internet. The certificate covers basic to advanced networking concepts including pulling cable, subnet masking, rules and strategies. Upon successful completion, the program graduate is qualified to take the CISCO Certified Network Associate examination. Students must demonstrate proficiency in using Windows.

All certificate courses must be completed with a grade of "C" or above.

REQUIRED COURSES	CREDITS
CNG 230 Fast Track CCNA 1 and 2	5
CNG 231 Fast Track CCNA 3 and 4	5
Total Required Credits for Certificate	**10**

Computer Technician: A+ Certificate

Code: F_CER_CINC
Campus: Boulder County, Larimer and Westminster

REQUIRED COURSES	CREDITS
CNG 121 Computer Technician I: A+	4
CNG 122 Computer Technician II: A+	4

Total Required Credits for Certificate	**8**

Computer Technician: Network+ Certificate

Code: F_CER_CMCI
Campus: Boulder County, Larimer and Westminster

REQUIRED COURSES	CREDITS
CNG 124 Networking I: Network+	3
CNG 125 Networking II: Network+	3
Total Required Credits for Certificate	6

Microsoft Network Administration Certificate

Code: F_CER_NMC
Campus: Boulder County, Larimer and Westminster

This certificate is designed to prepare students for senior roles as network administrators and for the core Microsoft Certified Professional examinations leading to the MCSA and MCSE.

Students must demonstrate course proficiency or course completion of CIS 128 Windows Complete or permission of instructor.

All certificate courses must be completed with a grade of "C" or above.

REQUIRED COURSES	CREDITS
CNG 211 Windows Configuration	3
CNG 212 Managing a MS Windows Server Environment	4
CNG 213 Implementing a MS Windows Network Infrastructure	4
CNG 131 Network Security Fundamentals (3) or CNG 217 Implementing Security for Microsoft Networks	3
Total Required Credits for Certificate	**14**

Programming Certificate

Code: F_CER_CTPA
Campus: Boulder County, Larimer and Westminster

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.

All certificate courses must be completed with a grade of "C" or above.

REQUIRED COURSES	CREDITS
CIS 145 Complete PC Database: Access	3
CSC 160 Computer Science I: C++	4
CSC 161 Computer Science II: C++	4
Total Required Credits	*11*

ADDITIONAL REQUIRED COURSES	CREDITS
Select 9 credits from the following:	
CSC 154 Introduction to Microsoft Visual Basic.net Programming	3
CSC 230 C Programming	3
CSC 233 Object Oriented Programming in C++	3
CSC 240 Java Programming	3
CSC 241 Advanced Java Programming	3
CSC 251 Programming with Microsoft VB.net	3
Total Additional Required Credits	*9*

Total Required Credits for Certificate	**20**

Web Authoring Certificate

Code: F_CER_WBDV
Campus: Boulder County, Larimer, Westminster and Online

This certificate provides entry-level skills in web page creation and web site maintenance. It is designed to provide students with the ability to create and/or manage a personal or business web site.

Program applicants must demonstrate course proficiency or course completion of CIS 128 Windows Complete.

All certificate courses must be completed with a grade of "C" or above.

REQUIRED COURSES	*CREDITS*
CWB 110 Complete Web Authoring	3
CWB 130 Complete Web Editing Tools	3
(or MGD 141 Web Design I)	
CWB 205 Complete Web Scripting	3
MGD 102 Introduction to Multimedia	3
(or MGD 111 Adobe Photoshop I)	
(or MGD 112 Adobe Illustrator I)	
Total Required Credits for Certificate	**12**

Web Developer Certificate

Code: F_CER_CSWB
Campus: Boulder County, Larimer and Westminster

REQUIRED COURSES	*CREDITS*
CIS 145 Complete PC Database: Access	3
CIS 244 PL/SQL	3
CSC 116 Logic and Programming Design	3
CWB 110 Complete Web Authoring	3
CWB 205 Complete Web Scripting (Javascript)	3
CWB 208 Web Application Development (PHP)	3
CWB 289 Capstone	2
(or MGD 289 Capstone)	
MGD 111 Adobe Photoshop	3
MGD 141 Web Design I	3
(or CWB 130 Complete Web Editing Tools)	
MGD 241 Web Design II	3
Total Required Credit for Concentration	**29**

Criminal Justice - Statewide Articulation Agreement for Associate of Arts Degree

A statewide agreement between the Colorado Community System and the Colorado Department of Higher Education is pending that would create an Associate of Arts Degree with a concentration in Criminal Justice for transfer to all public universities and 4-year colleges in Colorado offering bachelor degrees in Criminal Justice. Contact a college advisor for more information.

Criminal Justice Studies - Associate of General Studies Degree for Transfer to MSCD

This degree is intended for students wishing to transfer to Metropolitan State College of Denver (MSCD) and is designed to provide students with the first two years of a baccalaureate degree in criminal justice studies. The degree requirements are based upon general education requirements at four-year colleges/universities and upon a specific articulation agreement with MSCD. Many of these courses, but not all, transfer to the University of Northern Colorado (UNC). If you wish to transfer to UNC or to another college, please see the section below or speak with an advisor.

This program is designed for students pursuing careers in criminal justice that require a baccalaureate degree, but may also serve students for entry-level employment positions in criminal justice careers that require less than a four-year degree, or to improve current employability. It is oriented toward a broad overview to include an introduction of the field of criminal justice, law, corrections, judicial systems, delinquency and criminology.

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

Criminal Justice Studies - Area of Concentration

Criminal Justice

Code: F_AGS_AGS, CRJ
Campus: Larimer and Westminster

REQUIRED COURSES	*CREDITS*
CRJ 110 Criminal Justice	3
CRJ 125 Law Enforcement Operations	3
CRJ 145 Correctional Process	3
CRJ 205 Principles of Criminal Law	3
CRJ 236 Research Methods	3
Total Required Criminal Justice Credits	*15*

REQUIRED ELECTIVE COURSES	*CREDITS*
Select an additional 4-7 credits from the following courses:	
CRJ 135 Judicial Function	3
CRJ 220 Human Relations and Social Conflict	3
CRJ 230 Criminology	3
ETH 200 Introduction to Ethnic Studies	3
Other electives from the AA/AS Elective List in consultation with an advisor	
Total Required Elective Credits	*4-7*

REQUIRED GENERAL EDUCATION COURSES	*CREDITS*
ENG 121 English Composition I (GT-CO1)	3
ENG 122 English Composition II (GT-CO2)	3
PHI 112 Ethics (GT-AH3)	3
PSY 101 General Psychology I (GT-SS3)	3
SOC 101 Introduction to Sociology I (GT-SS3)	3
COM 115 Public Speaking	3
(or COM 125 Interpersonal Communication)	
Arts and Humanities* (select two courses, one course must be AH1, AH2 or AH4)	6
History* (one course HI1)	3

Mathematics* (one course MA1) *Note: MAT 121 recommended for forensic science*	3-4
Science* (two courses SC1) *Note: CHE 111 and CHE 112 recommended for forensic science*	8-10
Total Required General Education Credits	**38-41**
Total Required Credits for AGS Degree	**60**

*Note: Courses must be selected from the Colorado Guaranteed Transfer Program for General Education List.

Criminal Justice Studies - Associate of General Studies Degree For Transfer to UNC

Criminal Justice for Transfer to UNC

This degree is intended for students wishing to transfer to the University of Northern Colorado (UNC) and is designed to provide students with the first two years of a baccalaureate degree in criminal justice studies. The degree requirements are based upon general education requirements at four year colleges/universities and upon a specific articulation agreement with UNC.

This program is designed for students pursuing careers in criminal justice that require a baccalaureate degree, but may also serve students for entry-level employment positions or to improve current employability. It is oriented toward a broad overview to include an introduction of the field of criminal justice, law, corrections, judicial systems, restorative justice, delinquency, and criminology.

Criminal Justice Studies - Area of Concentration

Criminal Justice

Code: F_AGS_AGS, CRJ
Campus: Larimer

REQUIRED CRIMINAL JUSTICE COURSES	**CREDITS**
CRJ 110 Introduction to Criminal Justice	3
CRJ 125 Law Enforcement Operations	3
CRJ 145 Correctional Process	3
CRJ 236 Research Methods	3
Total Required Criminal Justice Credits	**12**

ELECTIVE COURSES	**CREDITS**
Select 19 additional credits from the following courses. May be counted toward degree at UNC:	
CRJ 205 Principles of Criminal Law	3
CRJ 135 Judicial Function (Required at UNC for CRJ degree)	3
CRJ 150 Victims of Crime and Trauma (Required at UNC for CRJ degree)	3
CRJ 210 Constitutional Law	3
CRJ 220 Human Relations and Social Conflict	3
CRJ 230 Criminology	3
CRJ 250 Computer Crime Investigation	3
International Studies (UNC Liberal Arts Core Requirement; SPA 111, 112, 211, or 212; if take SPA 211, do not count as AH-4)	3

Multicultural Studies (Required at UNC for Liberal Arts Core; choose from ASL 121, 122, 123, or 221; SOC 218; ETH 200 or 224; WST 200)	3
Selected additional Arts and Humanities, Social and Behavioral Sciences, or Physical and Life Sciences courses may also be chosen to fulfill UNC requirements. Please see an advisor.	
Total Elective Credits	**19**

REQUIRED GENERAL EDUCATION COURSES	**CREDITS**
ENG 121 English Composition I: GT-CO1	3
ENG 122 English Composition II: GT-CO2	3
Social Sciences* (select any of the FRCC GT courses; 3-6 credits from different subgroups)	3
Arts and Humanities* (select any of the FRCC GT courses including at least 2 listed subgroups ; SPA 211 is recommended)	6
History* (select one of the following from the FRCC GT course list: HIS 101,102, 111, 112, 201, 202, or 247)	3
MAT 135 Introduction to Statistics GT-MA1	3
Science* (select two classes with different prefixes from the following list: AST 101 or 102, BIO 105 or 111, CHE 101 or 105, GEY 111 or 121, MET 150, PHY 105 or 111; one course must include a lab component)	8
Total Required General Education Credits	**29**
Total Required Credits for AGS Degree	**60**

Note: *Courses must be selected from the State Guaranteed Education Course List.

Dental Assisting - Certificate

Code: F_CER_DEA1
Campus: Larimer

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 radiation safety.

The Front Range Dental Clinic, staffed by licensed dentists, provides a clinical experience, as well as an internship feature of the program. 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.

In order to graduate, a "C" grade must be earned in all courses required for the program. Completion of radiology courses qualifies students to take radiographs in the State of Colorado.

Assessment testing is required for all students. Students who place into ENG 090 (or above) MAT 090 (or above) and REA 090 (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	**CREDITS**
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 Advanced Dental Radiography	3
DEA 132 Medical Emergencies in the Dental Office	2
DEA 134 Prevention and Nutrition in Dentistry	2
DEA 181 Clinical Internship I	1
DEA 182 Clinical Internship II and Seminar	6
DEA 183 Clinical Internship III	2
General Studies Elective*	3
Total Required Credits for Certificate	**45**

Note: * Electives must be selected from the Approved General Education Electives List for the AAS degree.

Dietetic Technology - Associate of Applied Science Degree

Front Range Community College has closed the Dietetic Technology program and is no longer accepting students.

Dietetic Technology - Dietary Manager Certificate

Front Range Community College has closed the Dietary Manager Certificate program and is no longer accepting students.

Early Childhood Education - Associate of Applied Science Degree

Code: F_AAS_ECM2
Campus: Boulder County, Larimer and Westminster

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 all Colorado Department of Human Services licensing requirements. Those working with very young children need to be in good health and able to lift and carry young children comfortably.

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 ENG 090 (or above), MAT 090 (or above), and REA 090 (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	CREDITS
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 155 Family and Parenting Issues	1
ECE 179 Seminar	2
ECE 180 Internship	3
ECE 205 Nutrition, Health and Safety	3
ECE 220 Curriculum Development: Methods and Techniques	3
ECE 238 Child Growth and Development	4
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
ECE 279 Seminar	2
ECE 280 Internship	3
ECE Elective (program advisor approval) (see ECE electives below)	3
Total Required Credits	**45**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 121 English Composition I	3
Mathematics elective (program advisor approval)	3
Science or Humanities elective	3
Sociology elective	3
Psychology elective	3
Total Required General Education Credits	*15*
Total Required Credits for AAS Degree	**60**

ECE ELECTIVE COURSES	CREDITS
Choose 3 credits from the following with program advisor approval:	
ECE 108 The Assessment Process in Early Childhood Education	1
ECE 112 Introduction to Infant/Toddler Lab Techniques	3
ECE 127 Music/Movement for the Young Child	1
ECE 157 Family Dynamics	1
ECE 160 Behavior Management Techniques in Early Childhood Education	1
ECE 161 The Team Process	1
ECE 162 Transitions for Handicapped Adolescents	1
ECE 163 Facilitating Functional Skills for Communication	2
ECE 175 Special Topics	1-3
ECE 195 School Age Child in Child Care	2
ECE 225 Language and Cognition for the Young Child	3
ECE 226 Creativity and the Young Child	3
ECE 228 Language and Literacy	3
ECE 236 Child Growth/Development Laboratory	1
ECE 266 Multicultural Curriculum	3

Colorado Child Care Licensing Requirements

To be Group Leader-qualified by the State of Colorado, students must complete a minimum of two 3-credit hour

college courses in Early Childhood Education. One of those courses must be Introduction to Early Childhood Education (ECE 101). In addition, 24 months of verifiable work experience with children under the age of six in a licensed child care setting is required. Contact an ECE advisor for:

1. Specific courses that meet the above course requirements.

2. Assistance in completing the verifiable work experience and/or

3. Other options, as they pertain to community college courses.

To be Director-qualified in a large child care center by the State of Colorado, complete 24 semester hours of specific coursework, plus 24 months of verifiable work experience.

Contact an ECE faculty advisor for additional information concerning the course requirements.

Early Childhood Education - Certificates

Child Development Associate (CDA) Certificate

Code: F_CER_CD1
Campus: Boulder County, Larimer and Westminster

This certificate is nationally approved for child care workers, combining competency-based and traditional on-campus curriculum. To apply for CDA, students must be working with children under six years of age and hold a high school diploma or GED certificate. CDA students may earn a CDA credential as one of the following:

- An Infant-Toddler (0-3 years) Specialist*
- A Preschool (3-5 years) Specialist*
- A Family Day Care (0-5 years) Specialist*
- Homestart Specialist

Note: *In each specialty, students may earn a bilingual CDA.

REQUIRED COURSES	CREDITS
ECE 101 Introduction to Early Childhood Education	3
ECE 238 Child Growth and Development	4
ECE 279 Seminar: CDA	1
ECE 287 Cooperative Education	2
Plus select one of the following:	
For Center-Based Infant/Toddler Specialty:	
ECE 111 Infant and Toddler Theory and Practice	3
For Family Child Care or Center-based Preschool Specialty:	
ECE 220 Curriculum Development: Methods and Techniques	3
Total Required Credits for Certificate	**13**

NATIONAL CDA CREDENTIAL: Students may earn a national CDA credential in the following specialty areas:

- Center-based Infant/Toddler (0-3 years)*
- Center-based Preschool (3-5 years)*
- Family Child Care (0-5 years)*

Note: *A bilingual (Spanish/English) CDA may be earned in each specialty.

In addition to the above FRCC certificate, students must also have a minimum of 480 hours of documented experience to apply for the National CDA Credential. Please contact the department for specific requirements. This experience must be with children six years of age or younger and in a licensed

center or home setting. The training must be completed within the past five years and the final observation completed within six months of the end of classes.

Please contact the department for the specific requirements for applying for the CDA credential.

Director Certificate

Code: F_CER_ED3
Campus: Boulder County, Larimer, Westminster and Online

REQUIRED COURSES	CREDITS
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 205 Nutrition, Health and Safety	3
ECE 220 Curriculum Development: Methods and Techniques	3
ECE 238 Child Growth and Development	4
ECE 240 Administration of Early Childhood Care and Education Programs	3
ECE 241 Administration: Human Relations for Early Childhood Education	3
Total Required Credits for Certificate	**25**

Note: To meet state requirements, students must also complete 3,640 verifiable hours of direct child care experience with four or more children under the age of six in a licensed child development program. Students completing the AAS degree need 1,820 verifiable hours of direct child-care experience with children under the age of six in a licensed child development program.

Group Leader Certificate

Code: F_CER_ED5
Campus: Boulder County, Larimer, Westminster and Online

REQUIRED COURSES	CREDITS
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 238 Child Growth and Development	4
Total Required Credits for Certificate	**16**

Note: To be Group Leader-qualified by the State of Colorado, students must complete a minimum of two 3-credit hour courses in Early Childhood Education. One of those courses must be Introduction to Early Childhood Education (ECE 101). In addition, 24 months of verifiable work experience with children under the age of 6 in a licensed child care setting is required.

Infant-Toddler Nursery Supervisor Certificate

Code: F_CER_ECI1
Campus: Boulder County, Larimer and Westminster

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.

REQUIRED COURSES	CREDITS
HWE 141 Infant Nutrition	1
ECE 111 Infant and Toddler Theory and Practice	3
ECE 112 Introduction to Infant/Toddler Lab Techniques	3
ECE 155 Family and Parenting Issues	1
ECE 260 Exceptional Child	3
Total Required Credits for Certificate	**11**

Paraprofessionals in the Inclusive Classroom Certificate

Code: F_CER_PR1
Campus: Larimer and Westminster

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.

REQUIRED COURSES	CREDITS
ECE 157 Family Dynamics	1
ECE 160 Behavior Management Techniques in Early Childhood Education	1
ECE 161 The Team Process	1
ECE 238 Child Growth and Development	4
ECE 260 Exceptional Child	3
ECE 279 Seminar	2
ECE 280 Internship	3
Electives**	15
Total Required Credits for Certificate	**30**

Note: ** Selection of elective credits must be approved with an ECE faculty advisor. Options may include general studies courses based on the student's interest and/or career plans.

Early Childhood Education for Transfer - Associate of Arts Degree

Code: F_AA_AA, ECET
Campus: Boulder County, Larimer and Westminster

Early Childhood Education for Transfer - Area of Concentration

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 090 (or above), and REA 090 (or above) may begin this program of study.

Early Childhood Education

This area of emphasis 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.

REQUIRED COURSES	CREDITS
Communications:	
COM 115 Public Speaking (grade of "B" or above is required)	3
ENG 121 English Composition I (GT-CO1)	3
ENG 122 English Composition II (GT-CO2)	3
Total Communications Credits	*9*
Arts and Humanities:	
ART 110 Art Appreciation (GT-AH1)	3
(or MUS 120 Music Appreciation (GT-AH1))	
AND	
LIT 115 Introduction to Literature (GT-AH2)	3
(or LIT 255 Children's Literature)	
Total Arts and Humanities Credits	*6*
Mathematics: (Select one of the following tracks)	
Track 1:	
MAT 120 Mathematics for the Liberal Arts (GT-MA1)	4
(or MAT 121 College Algebra (GT-MA1))	
MAT 135 Introduction to Statistics (GT-MA1)	3
Track 2:	
MAT 155 Integrated Mathematics I	3
MAT 156 Integrated Mathematics II	3
Total Mathematics Credits	*6*
Social and Behavioral Sciences:	
GEO 105 World Regional Geography (GT-SS2)	3
HIS 201 U.S. History I (GT-HI1)	3
POS 111 American Government (GT-SS1)	3
Total Social and Behavioral Sciences Credits	*9*
Natural and Physical Sciences: (Select one of the following tracks)	
SCI 155 Integrated Science I	4
SCI 156 Integrated Science II	4
Total Natural and Physical Sciences Credits	*8*
Early Childhood Education 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	4
ECE 241 Administration: Human Relations for Early Childhood Education	3
Total Early Childhood Education Credits	*16*
Electives: Select in consultation with program advisor	6
Total Required Credits for AA Degree	**60**

Elementary Education for Transfer - Associate of Arts Degree

Elementary Education for Transfer - Area of Concentration

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 099 (or above), and REA 090 (or above) may begin this program of study.

Elementary Education

Code: F_AA_AA, EEDT
Campus: Boulder County, Larimer and Westminster

This degree offers an area of concentration that 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. Forty-one of the indicated credits are common to all elementary education programs. Students should consult with a program advisor to select the final 19 credits based upon the requirements of the institution to which the student intends to transfer.

REQUIRED COURSES	CREDITS
Communications:	
COM 115 Public Speaking	3
ENG 121 English Composition I (GT-CO1) (grade of "B" or above is required)	3
ENG 122 English Composition II (GT-CO2)	3
Total Communications Credits	*9*
Arts and Humanities:	
(Select one course from the following)	
LIT 115 Introduction to Literature I (GT-AH2)	3
LIT 201 Masterpieces of Literature I (GT-AH2)	3
LIT 202 Masterpieces of Literature II (GT-AH2)	3
LIT 211 Survey of American Literature I (GT-AH2)	3
LIT 221 Survey of British Literature I (GT-AH2)	3
Total Arts and Humanities Credits	*3*
Mathematics:	
MAT 155 Integrated Mathematics I	3
MAT 156 Integrated Mathematics II	3
Total Mathematics Credits	*6*
Social and Behavioral Sciences:	
GEO 105 World Regional Geography (GT-SS2)	3
HIS 201 U.S. History I (GT-HI1)	3
POS 111 American Government (GT-SS1)	3
Total Social and Behavioral Sciences Credits	*9*
Natural and Physical Sciences:	
SCI 155 Integrated Science I	4
SCI 156 Integrated Science II	4
Total Natural and Physical Sciences Credits	*8*
Education Requirements:	
EDU 221 Introduction to Education	3
PSY 238 Child Development	3
Total Education Credits	*6*
Electives: Select in consultation with program advisor	*19*
Total Required Credits for AA Degree	**60**

Note: Policies for accepting grades in transfer:

1. Only academic courses with a letter grade of "C" or above will be accepted for transfer.

2. A grade of "B" or above must be earned for ENG 121 English Composition I consistent with the Colorado Standard Teacher Education Admission Standard.

Emergency Medical Services - Certificates

These certificates prepare students to provide emergency medical services to the general public. Certificate programs include: Basic Emergency Medical Technician, Intermediate Emergency Medical Technician, Pre-Paramedic, and 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. Contact campus Program Directors for specific immunization requirements.

Assessment testing is required for all students. Students who place into ENG 090 (or above) and REA 090 (or above) may begin taking this program of study.

Emergency Medical Technician – Basic Certificate

Code: F_CER_EMTB
Campus: Boulder County, Larimer and Westminster

REQUIRED COURSES	CREDITS
EMS 125 EMT Basic	9
EMS 170 EMT Basic Clinical	1
Total Required Credits for Certificate	**10**

Emergency Medical Technician – Intermediate Certificate

Code: F_CER_EMTI
Campus: Larimer

REQUIRED COURSES	CREDITS
EMS 203 EMT Intermediate I	6
EMS 205 EMT Intermediate II	6
Total Required Credits for Certificate	**12**

Pre-Paramedic Certificate

Code: F_CER_EMSP
Campus: Boulder County, Larimer and Westminster

REQUIRED COURSES	CREDITS
BIO 201 Human Anatomy and Physiology I	4
BIO 202 Human Anatomy and Physiology II	4
EMS 125 EMT Basic	9
EMS 130 EMT Intravenous Therapy	2
EMS 170 EMT Basic Clinical	1
HPR 178 Seminar: Medical Terminology	1
HPR 190 Basic EKG Interpretation	2
Total Required Credits for Certificate	**23**

Paramedic Certificate

Code: F_CER_EMSA
Campus: Westminster

This certificate is designed to prepare a credential-eligible paramedic who has a clearly delineated scope of responsibility to provide immediate, on-scene patient care to those suffering sudden illness or injury.

Program prerequisite: Pre-Paramedic certificate or equivalent or as approved by EMS program director. Assessment testing is required for all students.   Students who place into ENG 090 (or above), and MAT 090 (or above), and REA 090 (or above) may begin taking this program of study.

REQUIRED COURSES	CREDITS
EMS 225 Fundamentals of Paramedic Practice	3
EMS 226 Fundamentals of Paramedic Practice Lab	2
EMS 227 Paramedic Special Considerations	3
EMS 228 Paramedic Special Considerations Lab	2
EMS 229 Paramedic Pharmacology	3
EMS 230 Paramedic Pharmacology Lab	2
EMS 231 Paramedic Cardiology	5
EMS 232 Paramedic Cardiology Lab	1
EMS 233 Paramedic Medical Emergencies	4
EMS 234 Paramedic Medical Emergencies Lab	1
EMS 235 Paramedic Trauma Emergencies	4
EMS 236 Paramedic Trauma Emergencies Lab	1
EMS 280 Paramedic Internship I	6
EMS 281 Paramedic Internship II	6
Total Required Credits for Certificate	**43**

Engineering for Transfer - Associate of Science Degree

Engineering for Transfer

Campus: Boulder County, Larimer and Westminster

Engineering covers a broad spectrum of occupational areas; students build a strong foundation in math and science and then proceed to transfer into a program of their choice.   This sequence of courses is designed for transfer into a baccalaureate degree at Colorado Universities offering programs of engineering.

Two options are available for students; (1) the statewide articulation agreement between Colorado Community College System and Colorado Institutions with Colleges of Engineering.   (2) A specialized transfer agreement with Colorado School of Mines (CSM).

Certain conditions apply; students should consult with an advisor.   For further information: www.frontrange.edu/engineering.

OPTION 1:
STATE GUARANTEED GENERAL EDUCATION FOR ENGINEERING

Please see the information at http://highered.colorado.gov/Academics/Transfers that lists all of the different state 4-year engineering schools and which courses they will accept in transfer.   Please also see an advisor for more information on this program.

OPTION 2:

COLORADO SCHOOL OF MINES – ENGINEERING FOR TRANSFER

A transfer agreement between Colorado School of Mines and Front Range Community College expands the number of credits and allows FRCC students to take their first two years of engineering courses at FRCC. Students completing the prescribed credits may transfer to CSM entering with junior status. For more information on the CSM/FRCC transfer agreement go to www.frontrange.edu/engineering or see an advisor.

Forestry, Wildlife and Natural Resources - Associate of Applied Science   Degree

Code: F_AAS_FWN
Campus: Larimer

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.

Assessment testing is required for all students. Students who are reading at the college level, and place into ENG 090 (or above), MAT 090 (or above), and REA 090 (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	CREDITS
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
Total Required Credits	*12*

REQUIRED GENERAL EDUCATION COURSES	CREDITS
BIO 111 General College Biology I with Lab (or CHE 101 Introductin to Chemistry I with Lab)	5
ENG 121 English Composition I (or COM 115 Public Speaking)	3
MAT 107 Career Mathematics (or MAT 135 Introduction to Statistics)	3
Arts and Humanities Elective*	3
Elective: SOC, PSY*	3
Total Required General Education Credits	*17*

*Note: * Electives must be selected from the Approved General Education Electives List for the AAS degree.*

ELECTIVE COURSES	CREDITS
Select 31 credits from the following:	
AQT 102 Fish Biology	5
AQT 245 Pond Management	5
BIO 222 General College Ecology	4
FSW 100 S Intro to Wildland Fire	1
FSW 101 S130 Firefighting Training	2

GIS 210 Intermediate GIS	3
HLT 240 Introductory Soil Science	4
HLT 264 Arboriculture	3
NRE 121 Introduction to Hydrology	3
NRE 200 Tropical 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: Wildlife Ecology	3
NRE 280 Internship	1-5
NRE 285 Independent Study	1-5
PER 252 Principles of Outdoor Recreation	3
Total Required Elective Credits	*31*
Total Required Credits for AAS Degree	**60**

Note: Students may not apply more than 6 credits in Internship or Independent Study programs to the degree.

Natural Resources For Transfer

Several courses in the Forestry, Wildlife, and Natural Resources programs will transfer into one of the baccalaureate degree programs at Colorado State University in a natural resources field. Students should meet with an advisor to select appropriate courses based upon their transfer objectives.

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.

Environmental Education Certificate

Code: F_CER_EEDI
CAMPUS: LARIMER

REQUIRED COURSES	CREDITS
NRE 100 Foundations of Forestry or NRE 205 Wildlife and Fisheries Management Principles	3
NRE 225 Environmental Education	3
NRE 280/285 Internship/Independent Study or NRE Elective	3
Total Required Credits for Certificate	**9**

Forestry Certificate

Code: F_CER_FWN
Campus: Larimer

REQUIRED COURSES	CREDITS
NRE 100 Foundations of Forestry	3
NRE 110 Forestry Field Research	3
NRE 280 Internship or NRE 285 Independent Study	3
Total Required Credits for Certificate	**9**

Natural Resources Certificate

Code: F_CER_NRT3
Campus: Larimer

REQUIRED COURSES	CREDITS
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 280/285 Internship/Independent Study or NRE Elective 4	4
Total Required Credits for Certificate	**16**

Natural Resources Geographic Information Systems Certificate

Code: F_CER_FWNG
Campus: Larimer

REQUIRED COURSES	CREDITS
GIS 101 Introduction to Geographic Information Systems	3
GIS 210 Intermediate Geographic Information Systems	3
NRE 280/285 Internship/Independent Study or NRE Elective	3
Total Required Credits for Certificate	**9**

Natural Resources Recreation Certificate

Code:F_CER_NRR
Campus: Larimer

REQUIRED COURSES	CREDITS
PER 252 Principles of Outdoor Recreation	3
NRE 265 Wilderness Education or NRE 225 Environmental Education	3
NRE 280/285 Internship/Independent Study or NRE Elective	3
Total Required Credits for Certificate	**9**

Wildland Fire Certificate

Code: F_CER_FWNW
Campus: Larimer

REQUIRED COURSES	CREDITS
FSW 100 S190 Intro to Wildland Fire	1
FSW 101 S 130 Firefighting Training	2
NRE 100 Foundations of Forestry (or NRE 110 Forestry Field Research or NRE 280/285 Internship/Independent Study) or NRE Elective 3	3
NRE 215 Fire Ecology	3
Total Required Credits for Certificate	**9**

Wildlife Certificate

Code: F_CER_FWND
Campus: Larimer

REQUIRED COURSES	CREDITS
NRE 110 Forestry Field Research	3

REQUIRED COURSES	CREDITS
NRE 205 Wildlife and Fisheries Management and Principles	3
NRE 230 Wildlife Law Enforcement or	3
NRE 285/280 Internship/Independent Study or NRE elective	
Total Required Credits for Certificate	**9**

Geographic Information Systems - Certificates

Geographic Information Systems Certificate

Code: F_CER_GIS1
Campus: Boulder County

This certificate provides career opportunities in the expanding field of geographic information systems. Students receive both the necessary theoretical background and practical experience.

Assessment testing is required for all students. Students who place in ENG 090 (or above), MAT 090 (or above), and REA 090 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	CREDITS
BUS 217 Business Communication and Report Writing	3
(or ENG 131 Technical Writing I)	
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 *(or GIS 221 Community Assessment and Analysis - 3 credits)*	4
Total Required Credits	**15**

REQUIRED ELECTIVES	CREDITS
Select 6 credits from the following:	
GIS 150 Relational Database Management Systems	3
GIS 165 GIS Project Management	3
GIS 211 Spatial Data Modeling and Analysis	4
GIS 221 Community Assessment and Analysis	3
GIS 275 Special Topics: GPS Field Studies	1-6
GIS 280 Internship	1-6
Total Required Elective Credits	**6**
Total Required Credits for Certificate	**21**

GIS Fundamentals Certificate

Code: F_CER_GISF
Campus: Boulder County

REQUIRED COURSES	CREDITS
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:

REQUIRED COURSES	CREDITS
GIS 150 Relational Database Management Systems	3
GIS 165 GIS 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	1-6
GIS 285 Independent Study	1-6
Total Required Credits for Certificate	**12**

Health Information Technology - Associate of Applied Science Degree

Code: F_AAS_HIT1
Campus: Westminster

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.

REQUIRED COURSES	CREDITS
HIT 101 Health Information Management Science	6
HIT 105 Physicians Coding Reimbursement	3
HIT 111 Health Data Management	3
HIT 112 Legal Aspects for Health Records	2
HIT 188 Health Information Practicum I	2
HIT 221 Clinical Classifications I	5
HIT 222 Quality Management	3
HIT 225 Health Information Management	3
HIT 231 Clinical Classifications II	5
HIT 241 CPT Coding Basics Principles	2
HIT 288 Health Information Practicum II	2
HPR 106 Law & Ethics for Health Professions	2
HPR 178 Seminar: Medical Terminology	1
MOT 125 Basic Medical Sciences I	3
MOT 133 Basic Medical Sciences II	3
MOT 135 Basic Medical Sciences III	3
Total Required Credits	**48**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
COM 125 Interpersonal Communications	3
ENG 121 English Composition I	3
or ENG 131 Technical Writing I	
MAT 135 Introduction to Statistics	3
PSY 101 General Psychology	3
CIS 118 Introduction to PC Applications	3
Total Required General Education Credits	**15**
Total Required Credits for AAS Degree	**63**

Note: * Electives must be selected from the Approved General Education Electives List for the AAS degree.

Heating, Ventilation, and Air Conditioning - Associate of Applied Science Degree

Code: F_AAS_HVA
Campus: Larimer

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.

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 place in ENG 090 (or above), MAT 090 (or above), and REA 090 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 Exam (ICE) Section 1, 2 and 3 as a requirement for this AAS degree.   Cost of each section of the ICE Exam is $30.00.   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	CREDITS
CAD 100 Blueprint Reading	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 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 HVA 289 Capstone	1
MTE 110 Manufacturing Communication and Teamwork or COM 125 Interpersonal Communications	3
Total Required Credits	**47**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 131 Technical Writing I	3
MAT 107 Career Mathematics	3
PHY 105 Conceptual Physics	4
General Studies Elective*	3
Social and Behavioral Sciences or Arts and Humanities Elective*	3
Total Required General Education Credits	*16*
Total Required Credits for AAS Degree	**63**

*Note: * Electives must be selected from the Approved General Education Electives List for the AAS degree.*

Heating, Ventilation, and Air Conditioning - Certificates

Light Commercial Air Conditioning and Heating Certificate

Code: F_CER_HVL
Campus: Larimer

This certificate provides training in light commercial air conditioning and heating.   Students must complete the Industry Competency Exam (ICE) Section 1 as a requirement of this certificate. Cost of the Section 1 ICE Exam is $30.00. 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	CREDITS
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 201 Heating for Commercial Applications	3
HVA 202 Troubleshooting and Customer Service	3
HVA 203 Industrial Controls	3
MTE 110 Manufacturing Communication and Teamwork or COM 125 Interpersonal Communications	3
Total Required Credits for Certificate	**35**

Residential Air Conditioning and Heating Certificate

Code: F_CER_HVAA
Campus: Larimer

This certificate provides training in basic to advanced air conditioning and heating.   Students must complete the Industry Competency Exam (ICE) Section 2 as a requirement of this certificate.   Cost of the Section 2 ICE Exam is $30.00. 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	CREDITS
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 247 Hot Water Heating Systems	4

MTE 110 Manufacturing Communication and Teamwork	3
or COM 125 Interpersonal Communications	
Total Required Credits for Certificate	**30**

Commercial Refrigeration Certificate

Code: F_CER_HVAM
Campus: Larimer

This certificate provides training in residential and commercial refrigeration.   Students must complete the Industry Competency Exam (ICE) Section 3 as a requirement of this certificate.   Cost of Section 3 ICE Exam is $30.00.   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	CREDITS
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
MTE 110 Manufacturing Communication and Teamwork	3
or COM 125 Interpersonal Communications	
Total Required Credits for Certificate	**25**

Holistic Health - Certificate

Code: F_CER_HHP1
Campus: Larimer

Assessment testing is required for all students. Students who place in ENG 090 (or above), MAT 090 (or above), and REA 090 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 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 massage therapy and herbology.

REQUIRED COURSES	CREDITS
HHP 229 Wellness Counseling	1
HHP 244 Holistic Health Level I	1
HHP 254 Holistic Health Level II	2
HHP 256 Holistic Health Level III	2
Total Required Credits	*6*
REQUIRED ELECTIVE COURSES	CREDITS
Select HHP courses in consultation with a faculty advisor in the Holistic Health Program.	*9*
Total Credits Required for Certificate	*15*

Horticulture and Landscape Technologies - Associate of Applied Science Degree

Code: F_AAS_HLT
Campus: Larimer and Westminster

This program prepares students for a wide range of careers in landscape horticulture.   Student may also complete specialized certificates in:

- Floral Design
- Horticulture
- Irrigation Contracting and Management
- Landscape Construction
- Landscape Design
- Landscape Maintenance
- Nursery Greenhouse and Garden Center Management
- Turfgrass Management

In order to graduate from this program, all courses in both the degree and certificate programs must be completed with a "C" or better. Assessment testing is required of all students. Students who place into ENG 090 (or above), MAT090 (or above) and REA 090 (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 may complete some courses, enter the workforce, and then return at any time to complete the degree.

REQUIRED GENERAL EDUCATION COURSES	CREDITS
Arts and Humanities:	3
SPA 101 Conversational Spanish	
Communications:	3
ENG 121 English Composition I, or ENG 131 Technical Writing I, or COM 115 Public Speaking, or COM 125 Interpersonal Communication	
Mathematics: MAT 107 Career Mathematics	3
Science:	4
BIO 105 Science of Biology	
or CHE 101 Introduction to Chemistry I	
or higher - 5 cr.	
Social Science:	3
ECO 201 Principles of Macroeconomics	
or ECO 202 Principles of Microeconomics	
Total Required General Education Credits	*16*
REQUIRED MAJOR COURSES	CREDITS
HLT 101 Introduction to Horticulture	4
HLT 237 Landscape Construction Bidding and Estimating	2
HLT 240 Introductory Soil Science	4
HLT 280 Horticulture Internship	3
or HLT 287 Cooperative Education	
MAN 216 Small Business Management	3
Computer Technology Cluster:	6
Choose 6 credits from the following list of courses:	
CAD 101 Computer-Aided Drafting I (3 cr.)	
CAD 102 Computer-Aided Drafting II (3 cr.)	

CIS 118 Introduction to PC Applications (3 cr.)

CIS 145 Complete PC Database: Access (3 cr.)

CWB 110 Complete Web Authoring (3 cr.)

GIS 101 Introduction to Geographic Information Systems (3 cr.)

GIS 110 Introduction to Cartography (3 cr.)

MGD 111 Adobe Photoshop (3 cr.)

or MGD 112 Adobe Illustrator (3 cr.)

General Horticulture Cluster:	6

Choose 6 credits from the following list:

HLT 221 Woody Landscape Plants I (3 cr.)

HLT 222 Woody Landscape Plants II (3 cr.)

HLT 224 Herbaceous Perennials (4 cr.)

HLT 242 Turfgrass Management (4 cr.)

HLT 260 Plant Propagation (4 cr.)

Total Required Major Credits:	**28**

REQUIRED ELECTIVE COURSES

Students must complete a TOTAL OF 20 CREDITS from the following course clusters (A, B, C, D) and must complete a MINIMUM OF 3 CREDITS WITHIN EACH CLUSTER.

ELECTIVE CLUSTER A: LANDSCAPE DESIGN COURSES	**CREDITS**
HLT 126 Planting Design (2 cr.)	3 credits
HLT 130 Landscape Graphics Studio (3 cr.)	
HLT 140 Landscape Design and Planning (4 cr.)	
HLT 250 Landscape Irrigation Design (3 cr.)	

The following courses may be used to fulfill the credit requirements for cluster A - if they have not been used to fulfill credit requirements for the Computer Technology Cluster:

CAD 101 Computer-Aided Drafting I (3 cr.)

CAD 102 Computer-Aided Drafting II (3 cr.)

ELECTIVE CLUSTER B: LANDSCAPE INSTALLATION COURSES	**CREDITS**
HLT 235 Principles of Grading & Drainage (3 cr.)	3 Minimum
HLT 236 Landscape Construction (4 cr.)	
HLT 245 Green Industry Business Operations (3 cr.)	
HLT 247 Landscape Irrigation Installation (4 cr.)	

ELECTIVE CLUSTER C: LANDSCAPE MANAGEMENT COURSES	**CREDITS**
HLT 150 Introduction to Landscape Irrigation (2 cr.)	3 credits minimum
HLT 151 Irrigation Auditing & Scheduling (3 cr.)	
HLT 202 Landscape Plant Health Care (3 cr.)	
HLT 203 Plant Disease & Pest Field Study (2 cr.)	
HLT 208 Commercial Pesticide License Training (3 cr.)	
HLT 210 Landscape Management (3 cr.)	
HLT 264 Arboriculture (3 cr.)	

ELECTIVE CLUSTER D: SPECIALTY COURSES	**CREDITS**
FLD 100 Introductory to Floral Design (3 cr.)	3 credits minimum
FLD 200 Advanced Floral Design (3 cr.)	
HLT 105 Greenhouse Management & Crops (4 cr.)	
HLT 118 Rock and Water Gardening (2 cr.)	
HLT 120 Principles of Xeriscape (2 cr.)	
HLT 125 Landscape Drafting and Design (3 cr.)	
HLT 215 Nursery Management (2 cr.)	

HLT 216 Garden Center Management (2 cr.)

HLT 223 Annuals, Bulbs, and Grasses (2 cr.)

HLT 226 Interior Plants (2 cr.)

HLT 246 Golf and Sports Turf Management (2 cr.)

The following courses may be used to fulfill the credit requirements for cluster D – if they have not been used to fulfill credit requirements for the General Horticulture Cluster:

HLT 221 Woody Landscape Plants I (3 cr.)

HLT 222 Woody Landscape Plants II (3 cr.)

HLT 224 Herbaceous Perennials (4 cr.)

HLT 242 Turfgrass Management (4 cr.)

HLT 260 Plant Propagation (4 cr.)

Total Required Elective Credits	**20**
Total Required Credits for AAS Degree	**64**

Horticulture and Landscape Technologies - Certificates

The following certificates provide job entry or upgrading of skills in horticulture. Individual certificates are applicable to an AAS degree in Horticulture and Landscape Technologies. Students are encouraged to start the program by enrolling for a certificate degree as course work in all certificates is a building block towards an associate of applied science degree. See a faculty advisor for more information.

Floral Design Certificate

Code: F_CER_HLFD   Campus: Larimer

This certificate prepares students to work in or own a flower shop or floral service.

REQUIRED COURSES	**CREDITS**
FLD 100 Introductory Floral Design	3
FLD 200 Advanced Floral Design	3
HLT 101 Introduction to Horticulture	4
HLT 105 Greenhouse Management and Crops	4
HLT 226 Interior Plants	2
HLT 280/287 Internship/Cooperative Education	3
MAN 216 Small Business Management	3
Total Required Credits for Certificate	**22**

Horticulture Certificate

Code: F_CER_HLTH   Campus: Larimer and Westminster

This certificate allows students with unique career goals to design their own degree with faculty guidance.

REQUIRED COURSES	**CREDITS**
HLT 101 Introduction to Horticulture	4
HLT 240 Introductory Soil Science	4
Approved horticulture and non-major elective credits *(see horticulture advisor)*	22
Total Required Credits for Certificate	**30**

Irrigation Contracting and Management Certificate

Code: F_CER_HLT2   *Campus: Westminster*

This certificate prepares students to work for or own an irrigation contracting company. Water management is a critical and growing part of the landscape horticulture industry with great job prospects for interested students.

REQUIRED COURSES	CREDITS
CAD 101 Computer-Aided Drafting I	3
HLT 120 Principles of Xeriscape	2
HLT 150 Introduction to Landscape Irrigation	2
HLT 151 Irrigation Auditing	3
HLT 235 Principles of Grading and Drainage	3
HLT 237 Landscape Construction Bidding and Estimating	2
HLT 240 Introductory Soil Science	4
HLT 245 Green Industry Business Operations	3
HLT 247 Irrigation Installation	4
HLT 250 Irrigation Design	3
Total Required Credits for Certificate	**29**

Landscape Contracting Technician Certificate

Code: F_CER_CADL   *Campus: Larimer and Westminster*

This certificate prepares students to work in landscape construction or to start their own landscape construction company.

REQUIRED COURSES	CREDITS
HLT 101 Introduction to Horticulture	4
HLT 150 Introduction to Landscape Irrigation	2
HLT 210 Landscape Management	3
HLT 221 Woody Landscape Plants I	3
HLT 222 Woody Landscape Plants II	3
HLT 235 Principles of Grading and Drainage	3
HLT 236 Landscape Construction	4
HLT 240 Introductory Soil Science	4
HLT 245 Green Industry Business Operations	3
HLT 247 Landscape Irrigation Installation	4
Total Required Credits for Certificate	**33**

Landscape Design Certificate

See also Landscape CAD Technician.

Code: F_CER_HLTD   *Campus: Larimer and Westminster*

This certificate prepares students to work as landscape 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.

REQUIRED COURSES	CREDITS
HLT 130 Landscape Graphics Studio	3
HLT 140 Landscape Design and Planning	4
HLT 221 Woody Landscape Plants I	3
HLT 222 Woody Landscape Plants II	3

HLT 224 Herbaceous Perennials	4
Total Required Credits	**17**

REQUIRED ELECTIVES	CREDITS
Select 13 credits from the following:	
CAD 101 Computer-Aided Drafting I	3
HLT 120 Principles of Xeriscape	2
HLT 126 Planting Design	2
HLT 150 Introduction to Landscape Irrigation	2
HLT 210 Landscape Management	3
HLT 223 Annuals, Bulbs and Grasses	2
HLT 235 Principles of Grading and Drainage	3
HLT 236 Landscape Construction	4
HLT 237 Landscape Construction Bidding and Estimating	2
HLT 250 Landscape Irrigation Design	3
Total Required Elective Credits	*13*
Total Required Credits for Certificate	**30**

Landscape Maintenance Technician Certificate

CODE: F_CER HMT1 Campus: Larimer and Westminster

This program prepares students to work for landscape maintenance companies including tree care and plant health care companies.

REQUIRED COURSES	CREDITS
HLT 101 Introduction to Horticulture	4
HLT 150 Introduction to Irrigation	2
HLT 151 Irrigation Auditing	3
HLT 202 Landscape Plant Health Care	3
HLT 203 Plant Disease and Pest Field Study	2
HLT 208 Commercial Pesticide License Training	3
HLT 210 Landscape Management	3
HLT 240 Introductory Soil Science	4
HLT 247 Landscape Irrigation Installation	4
HLT 264 Arboriculture	3
Total Required Credits for Certificate	*31*

Nursery, Greenhouse and Garden Center Management Certificate

Code: F_CER_HLNG   *Campus: Larimer and Westminster*

This program prepares students to work in, or own, a wholesale or retail nursery or greenhouse industry or to own or work in a retail garden center.

REQUIRED COURSES	CREDITS
HLT 101 Introduction to Horticulture	4
HLT 105 Greenhouse Management and Crops *(or HLT 215 Nursery Management - 2 credits and HLT 216 Garden Center Management - 2 credits)*	4
HLT 202 Landscape Plant Health Care	3
HLT 203 Plant Disease and Pest Field Study	2
HLT 221 Woody Landscape Plants I	3

HLT 222 Woody Landscape Plants II	3
HLT 223 Annuals, Bulbs, and Grasses	2
(or HLT 226 Interior Plants – 2 credits)	
HLT 224 Herbaceous Perennials	4
HLT 240 Introductory Soil Science	4
HLT 260 Plant Propagation	4
Total Required Credits for Certificate	**33**

Turfgrass Management Certificate

Code: F_CER_HLTT   Campus: Larimer and Westminster

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.

REQUIRED COURSES	CREDITS
HLT 101 Introduction to Horticulture	4
HLT 150 Introduction to Landscape Irrigation	2
HLT 151 Irrigation Auditing	3
HLT 202 Landscape Plant Health Care	3
HLT 203 Plant Disease and Pest Field Study	2
HLT 208 Commercial Pesticide License Training	3
(or HLT 235 Principles of Grading and Drainage)	
HLT 210 Landscape Management	3
HLT 240 Introductory Soil Science	4
HLT 242 Turfgrass Management	4
HLT 246 Golf and Sports Turf Management	2
Total Required Credits for Certificate	**30**

Hospitality and Culinary Arts Management - Associate of Applied Science Degree

Code: F_AAS_HOSF
Campus: Larimer

This program offers a range of courses that provide training in the various aspects of the hospitality industry. The program is designed to prepare students with the necessary skills and knowledge for careers that include entry level management positions in the lodging, catering, tourism, institutional services and restaurant fields. Students have the option to participate in four culinary laboratory courses, as well as two practicums and one internship. During these courses, students receive applied experiences in both the food service and operations of the hospitality industry. National Restaurant Association certification is available for a number of the courses offered in the program. Additionally, ServeSafe® certification is awarded upon successful completion of CUA 101 Food Safety and Sanitation. Students must earn a "C" or above in all required courses applied to the degree program. Assessment testing is required for all students.

Students who place into ENG 090 (or above), MAT 090 (or above), and REA 090 (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 an advisor or HOS program director before registering for HOS 188, HOS 280 and HOS 288.

REQUIRED COURSES	CREDITS
CUA 101 Food Safety and Sanitation	2
HOS 110 Introduction to Hospitality	3
HOS 120 Service Management	3
HOS 121 Food Preparation	4
HOS 250 Hospitality Cost Control	3
HOS 288 Practicum II Code: (Food or Operations) or HOS 280 Internship	2
HWE 100 Human Nutrition	3
Total Required Credits	**20**

REQUIRED BUSINESS SUPPORT COURSES	
ACC 101 Fundamentals of Accounting	3
BUS 115 Introduction to Business	3
CIS 118 Introduction to PC Applications	3
Total Required Business Support Credits	**9**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 121 English Composition I	3
MAT 107 Career Mathematics	3
Arts and Humanities or Social Science Elective*	3
General Studies Elective*	3
Science Elective*	3
Total Required General Education Credits (see below*)	**15**

TOTAL REQUIRED CREDITS FOR AREA OF CONCENTRATION	
(SEE AREAS OF CONCENTRATION BELOW)	
Advanced Culinary Arts Concentration	18
Hotel Management Concentration	19
Restaurant Management Concentration	20
Special Events Planning Concentration	19
Total Required Credits for Area of Concentration	**18-20**
Total Required Credits for AAS Degree	**62-64**

*Note: * Electives must be selected from the Approved General Education Electives List for the AAS Degree.*

Advanced Culinary Arts Concentration

REQUIRED COURSES	CREDITS
HOS 112 Baking/Pastry	4
HOS 148 Introduction to Food & Beverage	3
HOS 241 Pantry and Deli Production	4
HOS 252 Advanced Food Preparation	4
HOS 280 Internship	3
Total Required Credits for Concentration	**18**

Hotel Management Concentration

REQUIRED COURSES	CREDITS
ACC 121 Principles of Accounting I	4
HOS 131 Planning for Special Events	3
HOS 242 Hotel Sales and Marketing	3

HOS 251 Hotel Operations	3
MAN 200 Human Resources Management I	3
MAN 226 Principles of Management	3
Total Required Credits for Concentration	**19**

Restaurant Management Concentration

REQUIRED COURSES	CREDITS
ACC 121 Principles of Management	4
HOS 148 Introduction to Food and Beverage	3
HOS 240 Purchasing and Menu Planning	3
HOS 252 Advanced Food Preparation	4
MAN 200 Human Resources Management I	3
MAN 226 Principles of Management	3
Total Required Credits for Concentration	**20**

Special Events Planning Concentration

REQUIRED COURSES	CREDITS
ACC 121 Accounting Principles	4
HOS 131 Planning for Special Events	3
HOS 141 Convention Management	3
HOS 148 Introduction to Food and Beverage	3
HOS 240 Purchasing and Menu Planning	3
MAN 200 Human Resources Management I	3
Total Required Credits for Concentration	**19**

Hospitality and Culinary Arts Management - Certificates

Culinary Arts Certificate

REQUIRED COURSES	CREDITS
CUA 101 Food Safety and Sanitation	2
HOS 112 Baking/Pastry	4
HOS 121 Food Preparation	4
HOS 241 Pantry and Deli Production	4
HOS 252 Advanced Food Preparation	4
HWE 100 Human Nutrition	3
MAT 107 Career Mathematics	3
Total Required Credits for Certificate	**24**

Events Planning Coordinator Certificate

REQUIRED COURSES	CREDITS
ACC 101 Accounting Fundamentals	3
CIS 118 Introduction to PC Applications	3
HOS 110 Introduction to Hospitality	3
HOS 131 Planning for Special Events	3
HOS 141 Convention Management	3
HOS 148 Introduction to Food and Beverage	3
HOS 240 Purchasing and Menu Planning	3
HOS 246 Marketing Hospitality Services	3
Total Required Credits for Certificate	**24**

Food & Beverage Management Certificate

REQUIRED COURSES	CREDITS
ACC 101 Accounting Fundamentals	3
CUA 101 Food Safety and Sanitation	2
CUA 120 Wines and Spirits	2
HOS 110 Introduction to Hospitality	3
HOS 121 Food Preparation	4
HOS 148 Introduction to Food and Beverage	3
HOS 240 Purchasing and Menu Planning	3
HOS 250 Food, Beverage, Labor Costs	3
HWE 100 Human Nutrition	3
Total Required Credits for Certificate	**26**

Hotel Operations Certificate

Code: F_CER_HOSO
Campus: Larimer

This certificate introduces students to career opportunities in the hospitality field of hotel operations.

REQUIRED COURSES	CREDITS
ACC 101 Accounting Fundamentals	3
CIS 118 Introduction to PC Applications	3
HOS 110 Introduction to Hospitality	3
HOS 131 Planning for Special Events	3
HOS 141 Conventions Management	3
HOS 242 Hotel Sales and Marketing	3
HOS 246 Marketing Hospitality Services	3
HOS 251 Hotel Operations	3
Total Required Credits for Certificate	**24**

Interior Design - Associate of Applied Science in Interior Design

Code: F_AAS_IND
Campus: Larimer & Westminster

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, 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.

Assessment testing is required for all students. Students who are reading at the college level and place into ENG 090 (or above) MAT 106 (or above) and REA 090 (or above), may begin this program of study. All courses applied to the certificates must be completed with a grade of "C" or higher.

REQUIRED COURSES	CREDITS
AEC 101 Basic Architectural Drafting	4
AEC 102 Residential Construction Drawing	4
AEC 121 Construction Materials Systems	3
AEC 123 Commercial Construction Drawings	4
CAD 101 Computer-Aided Drafting I	3

CAD 102 Computer-Aided Drafting II	3
CAD 219 3D/Max	3
CAD 224 REVIT	3
IND 105 Introduction to 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 and Specs	3
IND 225 Lighting Design	3
IND 231 Sustainable Design	3
IND 280 Internship or	1
IND 289 Capstone	
MDG 111 Adobe Photoshop I	3
Total Required Credits	**56**
REQUIRED GENERAL EDUCATION COURSES	*CREDITS*
ART 121 Drawing I	3
ENG 121 English Composition I	3
or ENG 131 Technical Writing I	
MAT 121 College Algebra	4
PSY 101 General Psychology I	3
Science Elective from the AAS General Education Electives list	3
Total General Education Credits.	**16**
Total Required Credits for AAS Degree	**72**
Other Suggested Courses:	3
ART 138 Photography I	
or CAD 202 Computer-Aided Drafting/3D	

Interior Design - Certificates

Fundamentals of Interior Design Certificate

Code: F_CER_IND
Campus: Larimer

REQUIRED COURSES	*CREDITS*
AEC 101 Basic Architectural Drafting	4
AEC 102 Residential Construction Drawing	4
AEC 121 Construction Materials Systems	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 219 3D/Max	3
CAD 224 REVIT	3
IND 105 Introduction to Interior Design	3
IND 113 Perspective & Rendering Techniques	3
IND 114 Space Planning	3
MGD 111 Adobe Photoshop I	3
Total Required Credits	**35**
REQUIRED GENERAL EDUCATION COURSES	*CREDITS*
ART 121 Drawing I	3
ART 138 Photography I	3

ENG 121 English Composition I	3
or ENG 131 Technical Writing I	
MAT 121 College Algebra	4
Total General Education Credits	**13**
Total Credits For Certificate	**48**
Other Suggested Courses:	
AEC 123 Commercial Construction Drawings	4
CAD 202 Computer-Aided Drafting/3D	3

Kitchen and Bath Design Certificate

Code: F_CER_INDE
Campus: Larimer

REQUIRED COURSES	*CREDITS*
AEC 101 Basic Architectural Drafting	4
AEC 102 Residential Construction Drawing	4
AEC 121 Construction Materials Systems	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
CAD 219 3D/Max	3
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 261 Kitchen and Bath Design II	3
MGD 111 Adobe Photoshop I	3
Total Required Credits	**39**
REQUIRED GENERAL EDUCATION COURSES	*CREDITS*
ART 121 Drawing I	3
ART 138 Photography I	3
ENG 121 English Composition I	3
or ENG 131 Technical Writing I	
MAT 121 College Algebra	4
Total General Education Credits	**13**
Total Credits For Certificate	**52**
Other Suggested Courses:	
AEC 123 Commercial Construction Drawings	4
CAD 202 Computer-Aided Drafting/3D	3
CAD 224 REVIT	3

Interpreter Preparation - Associate of Applied Science Degree

Code: F_AAS_IPP   Campus: Westminster

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.

In addition, program requirements include demonstrated mastery of program skills. Therefore students must receive a "B" or above in all ASL courses and at least a "C" in all other coursework. To enroll in IPP 282 Internship, students must have a "B" or above in IPP 205, IPP 207, IPP 225, IPP 227 and IPP 229.

Students who have received a grade of "C" in any of these courses may repeat the courses to earn the grade of "B" or above, but may only repeat these courses once.

Students who have not been enrolled for two or more years may be required to re-take some courses that have been successfully completed due to curriculum changes. Only one re-admission to the program may be permitted after receiving a grade of "D" or "F" in any interpreter preparation course.

By attending classes on a full-time basis, students may complete the program in two years. Educational standards for national certification will require a BA degree by 2012.   FRCC has partnered with Regis University for full transfer of the AAS degree for   a Bachelors in Applied Science (BAS) with a major of either Educational Interpreting or Community Interpreting. Contact the Interpreter Preparation Program for further information.

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 090 (or above), and REA 090 (or above) may begin working on the prerequisites defined in items 1 and 2 above..

REQUIRED COURSES	CREDITS
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
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 207 Specialized and Technical Communication	2
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
Total Required Credits	*60*
REQUIRED GENERAL EDUCATION COURSES	CREDITS
ANT 101 Cultural Anthropology	3
COM 115 Public Speaking	3

ENG 121 English Composition I	3
MAT 120 Math for Liberal Arts	3
Science or Humanities Elective*	3
Total Required General Education Credits	*15*

Total Required Credits for AAS Degree	**75**

*Note: *Electives must be selected from the Approved General Education Electives List for the AAS degree.*

Management

See Business Section

Marketing

See Business Section

Masonry Arts - Associate of Applied Science Degree

Code: F_AAS_MASS   Campus: Westminster

This program provides students with entry-level skills and upgrading for those already in the masonry construction field. Students work with brick, concrete block, glass block, tile, and stone in a variety of settings including walls, patios, fireplaces and building exteriors.

Masonry coursework is offered on an open-entry basis: students may complete some of the courses, enter the workforce, and then return to complete the degree or certificate 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 or certificate. Credit may be granted for previous education/training or related work experience. Demonstrated mastery of skills is required.

Assessment testing is required for all students. Students who place into ENG 099 (or above), MAT 090 (or above), and REA 090 (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.

REQUIRED COURSES	CREDITS
AEC 121 Construction Materials and Systems	4
AEC 122 Construction Documents and Practices	2
MAA 113 Masonry I	4
MAA 123 Masonry II	4
MAA 133 Masonry III	4
MAA 143 Masonry IV	4
MAA 153 Masonry V	4
MAA 163 Masonry VI	4
MAA 275 Masonry Special Projects	4
MAA 280 Internship	6
MAA 285 Masonry Independent Study	3
OSH 127 10 Hr Construction Industry Standards	1
Total Required Credits	*44*
REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 131 Technical Writing	3

MAT 107 Career Mathematics	3
PHY 105 Conceptual Physics	4
General Studies Elective	3
Social Science Elective	3
Total Required General Education Credits	*16*
Total Required Credits for AAS Degree	**60**

Masonry Certificate

Code: F_CER_MASS Campus: Westminster

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 090 (or above), and REA 090 (or above) may begin this program of study.

REQUIRED COURSES	CREDITS
MAA 113 Masonry I	4
MAA 123 Masonry II	4
MAA 133 Masonry III	4
MAA 143 Masonry IV	4
MAA 275 Masonry Special Projects	4
MAA 280 Internship	6
MAT 107 Career Mathematics	3
OSH 127 10 Hr Construction Industry Standards	1
Total Required Credits	*30*

Medical Office Technology - Associate of Applied Science Degree

Code: F_AAS_MOT2   Campus: Boulder County

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 of concentration includes an internship at a health care facility.

This program offers an AAS degree with three areas of concentration: Medical Assistant, Medical Administrative Assistant, or Billing Specialist. While high school graduation or GED are not required for enrollment in the MOT Degree program, students who take the National Certification exams must show evidence of high school graduation or GED in order to take National Certification exams.

All Medical Office Technology students:

- Assessment testing is required of all MOT students. Students who are reading at the college level and obtain the following Accuplacer scores should have the basic skills necessary for success in the program course work. Reading: RC – 80 or greater, English – SS95 or greater, Mathematics – EA61 or greater.
- Complete online background check at American DataBank as directed by program director. See *www.CCCS.edu/nursing* 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.

Additional requirements for Medical Assisting and Clinical Office 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.
- Assessment testing is required for all 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.

Medical Office Technology - Areas of Concentration

Insurance and Billing

Code: F_AAS_ MOT2,MOB   Campus: Boulder County

This area of concentration is designed to prepare individuals to work in an administrative role as a medical insurance billing specialist in a community health care facility.

REQUIRED COURSES	CREDITS
ACC 101 Fundamentals of Accounting	3
CIS 118 Introduction to PC Applications	3
HPR 106 Law and Ethics for Health Professions	2
HPR 137 Human Diseases	4
HPR 178 Advanced Medical Terminology	2
MOT 120 Medical Office Financial Management	3
MOT 130 Insurance, Billing and Coding	3
MOT 184 Billing Specialist Internship	4
Total Required Credits	*24*
REQUIRED GENERAL EDUCATION COURSES	CREDITS
BIO 106 Basic Anatomy and Physiology	4
(or BIO 201 Human Anatomy and Physiology I - 4 credits and BIO 202 Human Anatomy and Physiology II - 4 credits)	
ENG 121 English Composition I	3
MAT 107 Career Mathematics	3
(or MAT 121 College Algebra - 4 credits)	
PSY 101 General Psychology I	3
(or PSY 235 Human Growth and Development - 3 credits)	
Arts & Humanities Elective (Spanish recommended)*	3
Electives*	20
Total Required General Education Credits	*36*
Total Required Credits for AAS Degree	**60**

*Note: * Electives must be selected from the Approved Electives Lists for the AAS degree.*

Medical Administrative Assisting

Code: F_AAS_MOT2,MOAT *Campus: Boulder County*

This area of concentration is designed to prepare individuals to work in an administrative/secretarial role in a community health care facility.

REQUIRED COURSES	CREDITS
CIS 115 Introduction to Computer Information Systems	3
(or CIS 118 Introduction to PC Applications)	
HPR 106 Law and Ethics for Health Professions	2
HPR 178 Advanced Medical Terminology	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
Total Required Credits	**30**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
BIO 106 Basic Anatomy and Physiology	4
(or BIO 201 Human Anatomy and Physiology I -	
4 credits	
and BIO 202 Human Anatomy and Physiology II - 4 credits)	
ENG 121 English Composition I	3
MAT 107 Career Mathematics	3
(or MAT 121 College Algebra - 4 credits)	
PSY 101 General Psychology I	3
(or PSY 235 Human Growth and Development - 3 credits)	
Arts & Humanities Elective (Spanish recommended)*	3
Electives*	15
Total Required General Education Credits	**31**
Total Required Credits for AAS Degree	**61**

Note: * Electives must be selected from the Approved Electives Lists for the AAS degree.

Medical Assisting

Code: F_AAS_MOT2,MOTM *Campus: Boulder County*

This area of concentration is designed to prepare individuals to work in ambulatory or industrial facilities in both the clinical and administrative areas.

REQUIRED COURSES	CREDITS
CIS 115 Introduction to Computer Information Systems	3
(or CIS 118 Introduction to PC Applications)	
HPR 106 Law and Ethics for Health Professions	2
HPR 137 Human Diseases	4
HPR 178 Advanced Medical Terminology	2
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
Total Required Credits	**39**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
BIO 106 Basic Anatomy and Physiology	4
(or BIO 201 Human Anatomy and Physiology I -	
4 cr.	
and BIO 202 Human Anatomy and Physiology II - 4 cr.)	
ENG 121 English Composition I	3
MAT 107 Career Mathematics	3
(or MAT 121 College Algebra - 4 credits)	
PSY 101 General Psychology I	3
Arts & Humanities Elective (Spanish recommended)*	3
Electives*	6
Total Required General Education Credits	**22**
Total Required Credits for AAS Degree	**61**

Note: * Electives must be selected from the Approved Electives Lists for the AAS degree.

Medical Office Technology - Certificates

Assessment testing is required for all 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 certificates. 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.

Billing Specialist Certificate

Code: F_CER_MOTL *Campus: Boulder County*

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.

REQUIRED COURSES	CREDITS
ACC 101 Fundamentals of Accounting	3
BIO 106 Basic Anatomy and Physiology	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
HPR 178 Advanced Medical Terminology	2
MOT 120 Medical Office Financial Management	3
MOT 130 Insurance, Billing and Coding	3
MOT 184 Billing Specialist Internship	4
Total Required Credits for Certificate	**31**

Clinical Office Assistant Certificate

Code: F_CER_MOTC   *Campus: Boulder County*

This certificate is designed to prepare individuals to work in ambulatory health care facilities as a clinical assistant or aide. Upon completion, students are able to receive and prepare patients for physical examinations, and to assist with physical examinations, diagnostic tests and treatment procedures.

REQUIRED COURSES	CREDITS
BIO 106 Basic Anatomy and Physiology	4
HPR 106 Law and Ethics for Health Professions	2
HPR 137 Human Diseases	4
HPR 178 Advanced Medical Terminology	2
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 182 Clinical Internship	3
PSY 101 General Psychology I	3
(or PSY 235 Human Growth & Development - 3 credits)	
Total Required Credits for Certificate	**31**

Health Care Office Assistant Certificate

Code: F_CER_MOTR   *Campus: Boulder County*

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.

REQUIRED COURSES	CREDITS
CIS 118 Introduction to PC Applications	3
ENG 121 English Composition I	3
HPR 106 Law and Ethics for Health Professions	2
HPR 178 Advanced Medical Terminology	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
Total Required Credits for Certificate	**26**

Medical Administrative Assistant Certificate

Code: F_CER_MOTS   *Campus: Boulder County*

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.

REQUIRED COURSES	CREDITS
BIO 106 Basic Anatomy and Physiology	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
HPR 178 Advanced Medical Terminology	2
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	2
PSY 101 General Psychology I	3
(or PSY 235 Human Growth & Development - 3 credits.)	
Total Required Credits for Certificate	**39**

Medical Assistant Certificate

Code: F_CER_MED1   *Campus: Boulder County*

This certificate 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 Edition (ICD-9)* and *Physicians Current Procedural Terminology (CPT) coding*. Clinical skills include assisting with physical examinations, diagnostic tests and treatment procedures.

The certified Medical Assisting Program, Boulder County Campus, 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.

REQUIRED COURSES	CREDITS
BIO 106 Basic Anatomy and Physiology	4
ENG 121 English Composition I	3
HPR 106 Law and Ethics for Health Professions	2
HPR 137 Human Diseases	4
HPR 178 Advanced Medical Terminology	2
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
PSY 101 General Psychology I	3
Total Required Credits for Certificate	**46**

Medical Transcriptionist Certificate

Code: F_CER_MOTT   *Campus: Boulder County*

This certificate develops proficiency in the specialized field of medical transcription and is designed to prepare students for entry-level employment in medical transcription.

REQUIRED COURSES	CREDITS
BIO 106 Basic Anatomy and Physiology	4
CIS 135 Complete Word Processing	3
ENG 121 English Composition I	3
HPR 106 Law and Ethics for Health Professions	2
HPR 137 Human Diseases	4
HPR 178 Advanced Medical Terminology	2
MOT 132 Medical Transcription I	4
MOT 142 Medical Transcription II	4
MOT 150 Pharmacology for Medical Assistants	3
MOT 180 Medical Transcription Internship	3
Total Required Credits for Certificate	**32**

Multimedia Technology - Associate of Applied Science Degree

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 090 (or above), and REA 090 (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.

Multimedia Technology - Areas of Concentration

Animation

Code: F_AAS_MMT1,MTA Campus: Boulder County and Westminster

This degree prepares students for entry-level positions dealing with the production of interactive CD's, 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 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 more specific design skills, to gain an understanding of the application of web design, digital video production and specific drawing skills. Students work independently, as well as 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.

Assessment testing is required for all students. Students who are reading at the college level, and place into ENG 090 (or above), MAT 090 (or above), and REA 090 (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	CREDITS
MGD 102 Introduction to Multimedia	3
MGD 111 Adobe Photoshop I	3
MGD 112 Adobe Illustrator I	3

MGD 133 Graphic Design I	3
MGD 143 Web 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 257 Animation Production	3
(or MGD 289 Capstone)	
Total Required Credits	**36**

REQUIRED ELECTIVE COURSES	CREDITS
Select 3 courses from the following:	
ART 122 Drawing II	3
ART 125 Landscape Drawing I	3
ART 156 Figure Drawing I	3
COM 115 Public Speaking	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 Graphics II	3
MGD 258 Web Design Production	3
MGD 264 Digital Video Editing II	3
or any other MGD class(es) with program lead's permission	3-9
Total Elective Credits	**9**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ART 121 Drawing I	3
ART 131 Visual Concepts 2-D Design	3
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 107 Career Mathematics	3
(or MAT 120 Mathematics for the Liberal Arts)	
Science or Social Science Elective*	3
Total Required General Education Credits	**15**
Total Required Credits for AAS Degree	**60**

*Note: * Electives must be selected from the Approved General Education Electives List for the AAS degree.*

Print and Presentation

Code: F_AAS_MMT1,MMP   Campus: Boulder County and Westminster

This area of concentration prepares students for entry-level positions in print as digital artists, graphic artists and graphic designers. Students develop a high level of technical proficiency through the use of multiple software programs for creating, composing and displaying designs for print and other media presentation.

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 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.

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 ENG 090 (or above), MAT 090 (or above), and REA 090 (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	CREDITS
MGD 102 Introduction to Multimedia	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 211 Adobe Photoshop II	3
MGD 212 Adobe Illustrator II	3
MGD 213 Electronic Prepress	3
MGD 256 Graphic Design Production	3
(or MGD 289 Capstone)	
Total Required Credits	*36*

REQUIRED ELECTIVE COURSES	CREDITS
Select 9 credits from the following:	
ART 111 Art History: Ancient to Medieval	3
ART 112 Art History: Renaissance to Modern	3
ART 143 Digital Photo I	3
(or ART 138 Photography I)	
ART 207 Art History - 1900 to Present	3
ART 244 Digital Photo Studio	3
(or ART 248 Digital Darkroom)	
COM 115 Public Speaking	3
JOU 221 Newspaper Design I	3
MAR 216 Principles of Marketing	3
MAR 220 Principles of Advertising	3
or any other MGD class(es) with program lead's permission	3-9
Total Required Elective Credits	*9*

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ART 121 Drawing I	3
ART 131 Visual Concepts 2-D Design	3
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 107 Career Mathematics	3
(or MAT 120 Mathematics for the Liberal Arts - 4 credits)	
Science or Social Science Elective*	3
Total Required General Education Credits	*15*

Total Required Credits for AAS Degree   60

Note: * Electives must be selected from the Approved General Education Electives List for the AAS degree.

Video

Code: F_AAS_MMT1, MGDV   Campus: Westminster

Assessment testing is required for all students. Students who are reading at the college level, and place into ENG 090 (or above), MAT 090 (or above), and REA 090 (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	CREDITS
MGD 102 Introduction to Multimedia	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 243 Web Motion Graphics II	3
MGD 264 Digital Video Editing II	3
MGD 266 DVD Authoring	3
MGD 289 Capstone	3
Total Required Credits	*36*

REQUIRED ELECTIVE COURSES	CREDITS
Select 3 courses from the following:	
ART 111 Art History: Ancient to Medieval	3
ART 143 Digital Photography I	3
(or ART 138 Photography I)	
ART 244 Digital Photo Studio	3
(or ART 248 Digital Darkroom)	
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	3
or any other MGD class(es) with program lead's permission	3-9
Total Required Elective Credits	*9*

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ART 121 Drawing I	3
ART 131 Visual Concepts 2-D Design	3
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 107 Career Mathematics	3
(or MAT 120 Mathematics for the Liberal Arts – 4 credits)	
Science or Social Science Elective*	3
Total Required General Education Credits	*15*

Total Required Credits for AAS Degree   60

Note: * Electives must be selected from the Approved General Education Electives List for the AAS degree.

Web Media

Code: F_AAS_MMT1,MTW   Campus: Boulder County and Westminster

This area of concentration 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.

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 ENG 090 (or above), MAT 090 (or above), and REA 090 (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	CREDITS
MGD 102 Introduction to Multimedia	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 Web 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 Graphics II	3
MGD 258 Web Design Production	3
(or MGD 289 Capstone)	
MGD 264 Digital Video Editing II	3
Total Required Credits	**36**

REQUIRED ELECTIVE COURSES	CREDITS
Select 9 credits from the following:	
ART 111 Art History: Ancient to Medieval	3
ART 112 Art History: Renaissance to Modern	3
ART 143 Digital Photography I	3
(or ART 138 Photography I)	
ART 207 Art History: 1900 to Present	3
ART 244 Digital Photo Studio	3
(or ART 248 Digital Darkroom)	
COM 115 Public Speaking	3
CSC 240 Java Programming	3
CWB 110 Complete Web Authoring	3
CWB 205 Complete Web Scripting	3
CWB 206 Web Database	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 Elective(s) 3-9 Credits with program lead's permission.	3-9
Total Required Elective Credits	**9**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ART 121 Drawing I	3
ART 131 Visual Concepts 2-D Design	3
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 107 Career Mathematics	3
(or MAT 120 Mathematics for the Liberal Arts - 4 credits)	
Science or Social Science Elective*	3
Total Required General Education Credits	**15**
Total Required Credits for AAS Degree	**60**

Note: * Electives must be selected from the Approved General Education Electives List for the AAS. degree.

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 ENG 090 (or above), MAT 090 (or above), and REA 090 (or above), may begin this program of study. A grade of "C" or above must be earned for each course required for the degree.

Animation Certificate

Code: F_CER_MMA
Campus: Boulder County and Westminster

REQUIRED COURSES	CREDITS
MGD 102 Introduction to Media	3
MGD 111 Adobe Photoshop I	3
MGD 112 Adobe Illustrator I	3
MGD 152 Digital Animatics	3
MGD 153 3D Animation I	3
(or MGD 143 Web Motion Graphic Design I)	
MGD 165 After Effects I	3
(or MGD 143 Web Motion Graphic Design I)	
MGD 167 Game Design I	3
MGD 211 Adobe Photoshop II	3
MGD 253 3D Animation II	3
MGD 257 Animation Production	3
(or MGD 289 Capstone)	
Total Required Credits for Certificate	**30**

Digital Imaging Certificate

Code: F_CER_MMDI
Campus: Larimer

This certificate is designed for entry-level positions in digital photo labs, newspaper photo departments, and graphic design production.

REQUIRED COURSES	CREDITS
ART 138 Photography I	3
(or ART 143 Digital Photography I)	
ART 139 Photography II	3
(or ART 243 Digital Photography II)	
ART 140 Color Photography I	3
ART 248 Digital Darkroom	3
(or ART 244 Digital Photo Studio)	
MGD 111 Adobe Photoshop I	3
MGD 112 Adobe Illustrator I	3
MGD 117 Introduction to Visual Communications	3
(or MGD 102 Introduction to Multimedia)	
MGD 133 Graphic Design I	3
(or MGD 114 Adobe InDesign)	
MGD 211 Adobe Photoshop II	3
MGD 280 Internship	2
MGD 289 Capstone	1
Total Required Credits for Certificate	**30**

Graphic Design Technician Certificate

Code: F_CER_GRD1   Campus: Larimer and Westminster

This certificate is designed for entry-level positions in print production, graphic design, and newspaper production.

REQUIRED COURSES	CREDITS
ART 121 Drawing I	3
ART 131 Visual Concepts 2-D Design	3
ART 138 Photography I	3
(or ART 143 Digital Photography I)	
MGD 111 Adobe Photoshop I	3
MGD 112 Adobe Illustrator I	3
MGD 116 Typography I	3
MGD 133 Graphic Design I	3
(or MGD 114 Adobe InDesign)	
MGD 211 Adobe Photoshop II	3
MGD 233 Graphic Design II	3
(or MGD 213 Electronic Prepress)	
MGD 280 Internship	2
MGD 289 Capstone	1
Total Required Credits for Certificate	**30**

Multimedia General Certificate

Code: F_CER_MMTG
Campus: Boulder County and Westminster

REQUIRED COURSES	CREDITS
MGD 102 Introduction to Multimedia	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 143 Web Motion Graphic Design I	3
(or MGD 153 3D Animation I)	
MGD 211 Adobe Photoshop II	3
MGD 212 Adobe Illustrator II	3
MGD 256 Graphic Design Production	3
(or MGD 289 Capstone)	
Total Required Credits for Certificate	**30**

Multimedia Print/Presentation Certificate

Code: F_CER_MMMP
Campus: Boulder County and Westminster

REQUIRED COURSES	CREDITS
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 213 Electronic Prepress	3
MGD 256 Graphic Design Production	3
(or MGD 289 Capstone)	
Total Required Credits for Certificate	**30**

Multimedia Video Certificate

Code: F_CER_VDO
Campus: Westminster

REQUIRED COURSES	CREDITS
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 243 Web Motion Graphic Design II	3
MGD 264 Digital Video Editing II	3
MGD 266 DVD Authoring	3
Total Required Credits for Certificate	**30**

Multimedia Web Certificate

Code: F_CER_MMMW
Campus: Boulder County and Westminster

REQUIRED COURSES	CREDITS
MGD 102 Introduction to Multimedia	3
MGD 111 Adobe Photoshop I	3
MGD 112 Adobe Illustrator I	3
MGD 141 Web Design I	3
MGD 143 Web 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
(or MGD 289 Capstone)	
Total Required Credits for Certificate	**30**

Nursing

Colorado State Board of Nursing

The Front Range Community College Nursing Programs have Continuing Full Approval from the Colorado State Board of Nursing.

National League for Nursing Accreditation Commission, Inc.

3343 Peachtree Road NE, Suite 500, Atlanta, GA 30326
www.nlnac.org

- The Larimer Campus Nursing Program is accredited by the National League for Nursing Accrediting Commission (NLNAC).
- The Westminster Campus Nursing Program and Boulder County Campus Nursing Programs are each candidates for accreditation through the National League for Nursing Accrediting Commission (NLNAC) through Spring 2011.

Nursing - Associate of Applied Science Degree

Code: F_AAS_NUR1
Campus: Larimer and Westminster

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.

The program offers an LPN "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 the college level and obtain the following Accuplacer scores should have the basic skills necessary for success in program course work: *Reading:* RC-80 or greater, *English:* SS95 or greater and WP8-12, *Mathematics:* EA 61 or greater or must complete MAT 090, *Science:* department standard.

Admission Process for AAS Degree

Please contact a Nursing Department Representative at the campus of your choice for information on Nursing Program application process prior to submitting a program application. Admission to the nursing program is governed by standard admission procedures developed by the Colorado Community College System. FRCC nursing program admission requirements are subject to change in the Fall of 2011. The website for information is *www.CCCS.edu/nursing*.

The nursing programs at Front Range Community College have a wait list for enrollment. Students may obtain detailed information on requirements to be placed on the wait list 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 County Campus meetings are held the second Monday of each month at 5:00 pm (or 4:00 pm for LPN's wanting to pursue their RN) in room BP126 or contact by e-mail at *lccnursing @frontrange.edu*.

Requirements To Be Placed on Wait List:

1. Please contact a Nursing Department representative prior to submitting a program application.
   (The Larimer County campus maintains a separate wait list for students with a Bachelor degree or if pursuing a Bachelor degree from a Colorado Public University and within 12 credits of graduation. MAT 135 Statistics is required to place your name on this wait list.)

2. Provide proof of completion of the following prerequisites with a grade of " C" or above in each course:
   - 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
   - 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 2.50 or higher on prerequisite courses listed above.

   Please be sure to review the prerequisites for MAT 103, which is a required course in the first semester of the program. Students must have satisfied the MAT 103 prerequisites before starting the program.

3. In addition to the above wait list criteria, students are required to complete an online FBI fingerprinting check through American DataBank.

See *www.CCCS.edu/nursing* for a list of criminal offenses

appearing on a criminal background check that will disqualify an applicant for admission to a CCCS nursing program.

Upon successful completion of the wait list criteria, students contact a Nursing Department representative for the wait list application.   Upon receipt and verification of the above documentation, the student will be placed on the wait list at his/her chosen campus. FRCC wait list requirements are subject to change in the Fall of 2011.

Students may put their name on only one nursing waitlist within the Colorado Community College System.

Requirements for Nursing Program Admission:

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.

All prerequisite courses must be completed before the student will be placed on the Nursing program wait list. In addition, the requirements for admission are:

1. Complete online background check and drug screening at American DataBank.
   See *www.CCCS.edu/nursing* 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. Completion of a health summary with documented immunization records (prior to entrance to the first nursing course).

3. Current CPR Course - 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.

4. Ability to sufficiently speak and understand English and to comprehend verbal communication of English speaking clients.

5. 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.

Note: Upon successful completion of the nursing program, students receive an associate of applied science degree and are eligible to make application for the NCLEX® 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 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 "U" grade in a nursing course or withdraws from a nursing course.

REQUIRED NURSING COURSES	CREDITS
NUR 106 Medical and Surgical Nursing Concepts	9
NUR 109 Fundamentals of Nursing	8
NUR 112 Basics of Pharmacology	2
NUR 150 Nursing Care of Obstetric and Pediatric Clients	7
NUR 206 Advanced Concepts of Medical Surgical Nursing I	8
NUR 211 Nursing Care of Psychiatric Clients	4
NUR 212 Pharmacology II	2
NUR 216 Advanced Concepts of Medical Surgical Nursing II	6
NUR 230 Leadership, Management and Trends	5
Total Required Nursing Courses	*51*
REQUIRED GENERAL EDUCATION COURSES	**CREDITS**
BIO 201 Human Anatomy and Physiology I	4
BIO 202 Human Anatomy and Physiology II	4
BIO 204 Microbiology	4
BIO 216 Pathophysiology	4
ENG 121 English Composition I	3
HPR 108 Nutrition (or HWE 100 Human Nutrition 3 credits)	1
MAT 103 Math for Clinical Calculations	3
PSY 235 Human Growth and Development	3
Elective: GTE Humanities or Social Behavioral Science	3
Total Required General Education Courses	*29*
Total Credits Required for AAS Degree	**80**

Nursing Advanced Placement-Bridge Program (LPN to ADN)

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 (24) students each summer. Westminster and Larimer Campuses offer the Advanced Placement Program as space is available.

Information meetings for the Boulder County Campus are held the second Monday of the month (except for July and December) at 4 pm in Room C1264 or contact by e-mail at bccnursing@frontrange.edu

Larimer Campus LPN to ADN meetings are held on the second Monday of each month at 4 pm in Room BP126 or contact by e-mail at lccnursing@frontrange.edu.

Westminster Campus LPN to ADN meetings are held on the second Wednesday of each month (except for July or December) at 6 pm in Room B0353 or contact by e-mail at wcnursing@frontrange.edu.

Admission Process for LPN to ADN

Requirements To Be Placed on Wait List:

1. Contact the Nursing Program Representative at the campus where you plan to attend.   Telephone: Boulder County 303-678-3850, Larimer 970-204-8221, Westminster 303-404-5272.

2. Provide current Colorado LPN license in good standing.

3. If transferring classes to FRCC, complete a "Transfer Credit Evaluation Form" (Department of Admissions and Records)

4. Provide proof of completion of the following prerequisites with grade of "C" or above on each course and a cumulative GPA of 2.5 on these five 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

Must be completed within seven years prior to entry into the Nursing Program

5. Will be required to complete an FBI fingerprint check (required by all CCCS nursing program waitlists).

6. Science courses from accredited community and/or junior colleges must have been completed within seven years of entry into the second year of the nursing program for transfer approval.   See program representative if PN certificate was obtained more than three years prior to admission.   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.

7. Students may put their name on only one nursing waitlist within the Colorado Community College System.

Requirements for Bridge Program Admission:

1. If a student is transferring from another college, the transcript must be evaluated by the Office of Admissions and Records at the college the student attends or plans to attend.

2. Provide proof of completion of the following three courses with a grade of " C" or above in each course.   Please note that all science prerequisites expire after 7 years of completion.

- BIO 216   Pathophysiology
- HPR 108 Dietary Nutrition or HWE 100 Human Nutrition
- MAT 103* Math for Clinical Calculations* or approved Math course applicable to the AAS degree

Note: * Contact a nursing representative for details regarding this math course prior to taking the course.

3. Complete online background check and drug screening at American DataBank as directed by a nursing representative. See *www.CCCS.edu/nursing* for a list of criminal offenses appearing on a criminal background check that will disqualify an applicant for admission to a CCCS nursing program.

4. Complete a health summary with documented immunization records (just prior to entrance into the nursing program).

5. 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 through out the nursing program.

6. Ability to speak and sufficiently understand English and to comprehend verbal communication of English-speaking clients.

7. 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.

8. Completion of NUR 189: Transitions in Professional Nursing - LPN to ADN is required, before taking second year nursing courses. (Boulder County includes this course as part of its LPN to ADN program curriculum.)

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.

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	CREDITS
NUR 189 Transition from LPN to ADN	4
NUR 206 Advanced Concepts of Medical Surgical Nursing I	8
NUR 211 Nursing Care of Psychiatric Clients	4
NUR 212 Pharmacology II	2
NUR 216 Advanced Concepts of Medical Surgical Nursing II	6
NUR 230 Leadership, Management and Trends	5
Total Required Nursing Courses	*29*

REQUIRED GENERAL EDUCATION COURSES	CREDITS
BIO 201 Human Anatomy and Physiology I	4
BIO 202 Human Anatomy and Physiology II	4
BIO 204 Microbiology	4
BIO 216 Pathophysiology	4
ENG 121 English Composition I	3
HPR 108 Dietary Nutrition or HWE 100 Human Nutrition (3)	1
MAT 103 Math for Clinical Calculations or approved Math course applicable to the AAS degree	3
PSY 235 Human Growth and Development	3
Elective: GTE Humanities or Social Behavioral Science	3
Total Required General Education Courses	*29*
Total Credits Required for AAS Degree (in addition to credits transferred in from LPN program)	**58**

Nursing - Certificate

Practical Nursing Program Certificate

Code: F_CER_LPN2   Campus: Boulder County

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 program is designed for students whose primary goal is practical nursing. The practical nursing program is a one-year program of study. Students may elect a part time program of study to complete the practical nursing program. If graduates of this program wish to continue their education to the registered nurse level, the student must apply for the bridge program for LPN to ADN-RN program. Information meetings for the Boulder County Campus are held the second Monday of the month (except for July and December) at 2121 Miller Drive, Longmont CO, from 4 to 5 pm in room C1264.

Front Range Community College's Practical Nursing program is approved by the Colorado Board of Nursing.

Admission Process for Practical Nursing Certificate

Requirements for Placement on the Wait List:

1. Required Basic Skill Assessment Scores — Students must obtain the following scores: *Reading:* RC 80 or greater, *English:* SS 95 or greater and WP 8-12, *Mathematics:* EA 61 or greater, *Science:* department standard.

2. The following prerequisite courses must be completed with a Grade of "C" or above and a cumulative GPA of 2.5 on prerequisite courses:

   - 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

3. In addition to the above wait list criteria, students are required to complete an online FBI fingerprinting check through American DataBank as directed by a campus program advisor. See *www.CCCS.edu* for information.

See *www.CCCS.edu/nursing* for a list of criminal offenses appearing on a criminal background check that will disqualify an applicant for admission to a CCCS nursing program.

Upon successful completion of the wait list criteria, students should contact a nursing department representative for the wait list application. Upon receipt and verification of the above documentation, the student will be placed on the wait list. FRCC wait list requirements are subject to change in the Fall of 2010.

Students may put their name on only one nursing waitlist within the Colorado Community College System.

Requirements for Program Admission:

As soon as the student has contacted an academic advisor, completed prerequisite courses and met the wait list requirements, he/she should contact *bccnursing@frontrange.edu* to apply.

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:

1. *Current CPR Course - Completion of the American Heart Health Care Provider course –C and receive a 2-year recommended renewal date. The recommended renewal date must not expire prior to completion of the semester and must remain current through out the nursing program.

2. Completion of a health summary with documented immunization records (just prior to entrance into the nursing program).

3. Complete online criminal background check at American DataBank. See *www.CCCS.edu* for a list of criminal offenses appearing on a criminal background check that will disqualify an applicant from admission to a CCCS nursing program.

4. Ability to sufficiently speak and understand English and to comprehend verbal communication of English speaking clients.

5. 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 such as drug testing, fingerprinting and others. The expenses of these requirements are an additional cost to students.

6. A urine drug screen will be requested every year for part-time PN students.

Transfer students and students who complete NUR 105 Practical Nursing Arts and Skills with a grade of "C" or above, with a lapse of one semester or more in the clinical courses, are required to take one credit of NUR 185 Independent Study to update their knowledge and skills.

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.

REQUIRED NURSING COURSES	CREDITS
NUR 101 Pharmacology Calculations	1
NUR 102 Alterations in Adult Health I	4
NUR 103 Basic Health Assessment for the Practical Nurse	1
NUR 104 Alterations in Adult Health II	5
NUR 105 Practical Nursing Arts and Skills	6.5
NUR 110 Basic Pharmacology for the Practical Nurse	3
NUR 111 Socialization into Practical Nursing	1
NUR 113 Basic Concepts of Maternal-Newborn Nursing	2
NUR 114 Basic Concepts of Nursing of Children	2
NUR 115 Basic Concepts of Mental Health and Illness	1
NUR 116 Basic Concepts of Gerontological Nursing	1
NUR 131 Clinical I: Application of Practical Nursing Arts and Skills	4.5
NUR 132 Clinical II: Application of Alterations in Adult Health	3
NUR 133 Clinical III: Application of Basic Concepts of Maternal-Newborn and Pediatric Nursing	1.5
NUR 134 Clinical IV: Advanced Application in Adult Health	4.5
Total Required Nursing Courses	*41*
REQUIRED GENERAL EDUCATION COURSES	*CREDITS*
BIO 106 Basic Anatomy and Physiology	4

or BIO 201 Human Anatomy and Physiology I

and BIO 202 Human Anatomy and Physiology II

ENG 121 English Composition I	3
HPR 108 Dietary Nutrition or HWE 100 Human Nutrition 3 Credits	1
Total Required General Education Courses	**8**
Total Required Credits for the Certificate	**49**

Nurse Aide Certificate

Code: F_CER_NUA2   Campus: Boulder County, Larimer and Westminster

This certificate is designed to provide the student with entry-level skills required for employment as a nurse's aide in a long-term care facility, an acute care facility or a home health care agency. Special needs of the geriatric population are emphasized. A grade of "C" or above is required for all certificate courses. This certificate qualifies students to take the State Certification Examination.

The State Board of Nursing requires a criminal background check for all applicants for the State Certification Examination. Illegal behaviors that may make students ineligible to be certified include, but are not limited to: physical abuse, theft, illegal use of weapons, or illegal use or possession of controlled substances. Students may be required to have immunizations to meet O.S.H.A. guidelines (current TB test and MMR x 2).

Students who place into ENG 090 (or above) and REA 090 (or above) may begin this program of study.

REQUIRED COURSES	*CREDITS*
NUA 101 Certified Nurse Aide Health Care Skills	4
NUA 170 Nurse Aide Clinical Experience	1
Total Required Credits for Certificate	**5**

Paraeducator

See Early Childhood Education

Paralegal Studies - Associate of Applied Science Degree

Code: F_AAS_PAR   Campus: Boulder County, Online

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.

This program is offered partly online. You will complete a minimum of 12 credit hours of legal specialty courses through traditional classroom instruction. The classroom courses–Legal Research, Legal Writing, Civil Litigation I, and Legal Ethics–will be offered each semester in the evening so you can work and go to class.

In addition, the program provides the opportunity for students and current paralegals that wish to upgrade existing job skills

or those who are seeking a career change.

An internship is required in which students work in an actual legal setting as a paralegal.   Most courses in the program are delivered online and students must be computer literate and knowledgeable about the internet.

Assessment testing is required for all students. Students who place into ENG 121 (or above), MAT 090 (or above), and REA 090 (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	*CREDITS*
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 203 Civil Litigation I*	3
PAR 204 Civil Litigation II	3
PAR 206 Business Organizations	3
PAR 211 Legal Research*	3
PAR 212 Legal Writing*	3
PAR 287 Cooperative Education	3
Total Required Credits	**33**

REQUIRED COURSES	*CREDITS*
Select 9 credits from the following:	
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 216 Employment Law	3
PAR 228 Intellectual Property	3
Total Required Elective Credits	**9**

REQUIRED GENERAL EDUCATION COURSES	*CREDITS*
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	3
Science or Arts and Humanities elective selected from the GT courses	3
Total Required General Education Credits	**18**
Total Required Credits for AAS Degree	**60**

* Legal specialty courses are offered in traditional classroom format only.

Paralegal Studies - Certificate

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 090 (or above), and REA 090 (or above) may begin this program of study.

Legal Assistant Certificate

Code: F_CER_LGA2   Campus: Boulder County, Online

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. An internship is required in which students work in an actual legal setting as a paralegal. This program is offered partly online. You will complete a minimum of 12 credit hours of legal specialty courses through traditional classroom instruction. The classroom courses–Legal Research, Legal Writing, Civil Litigation I, and Legal Ethics–will be offered each semester in the evening so you can work and go to class. All students enrolled in the program must be computer literate and knowledgeable about the internet.

Assessment testing is required for all students. Students who are reading at the college level, and place into ENG 090 (or above), MAT 090 (or above), and REA 090 (or above) may begin this program of study.

REQUIRED COURSES	CREDITS
ENG 121 English Composition I	3
PAR 115 Introduction to Law	3
PAR 203 Civil Litigation I*	3
PAR 204 Civil Litigation II	3
PAR 206 Business Organizations	3
PAR 211 Legal Research*	3
PAR 212 Legal Writing*	3
PAR 287 Cooperative Education	3
Total Required Credits	**24**

REQUIRED ELECTIVE COURSES	CREDITS
Select 2 courses from the following:	
PAR 116 Torts	3
PAR 117 Family Law	3
PAR 118 Contracts	3
PAR 125 Property Law	3
PAR 126 Administrative Law	3
PAR 127 Legal Ethics	3
PAR 202 Evidence	3
PAR 205 Criminal Law	3
PAR 208 Probate and Estates	3
PAR 209 Constitutional Law	3
PAR 216 Employment Law	3
PAR 217 Environmental Law	3
PAR 228 Intellectual Property	3
Total Required Elective Credits	**6**
Total Required Credits for Certificate	**30**

* Legal specialty courses are offered in traditional classroom format only.

Paramedic - Associate of Applied Science Degree

Code: F_AAS_EMSA

Campus: Westminster

This two-year program is designed to prepare students for paramedicine careers including responders to pre-hospital and trauma emergencies and in emergency room treatment alongside physicians and nurses. Graduates are qualified for employment in various government and private health care organizations. It will prepare students for the national certification exam of the National Registry of Emergency Medical Technicians.

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 090 (or above), and REA 090 (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 must be completed with a "C" or above to graduate.

REQUIRED COURSES	CREDITS
EMS 225 Fundamentals of Paramedic Practice	3
EMS 226 Fundamentals of Paramedic Practice Lab	2
EMS 227 Paramedic Special Considerations	3
EMS 228 Paramedic Special Considerations Lab	2
EMS 229 Paramedic Pharmacology	3
EMS 230 Paramedic Pharmacology Lab	2
EMS 231 Paramedic Cardiology	5
EMS 232 Paramedic Cardiology Lab	1
EMS 233 Paramedic Medical Emergencies	4
EMS 234 Paramedic Medical Emergencies Lab	1
EMS 235 Paramedic Trauma Emergencies	4
EMS 236 Paramedic Trauma Emergencies Lab	1
EMS 280 Paramedic Internship I	6
EMS 281 Paramedic Internship II	6
Total Required Credits	**43**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
BIO 201 Human Anatomy and Physiology I	4
BIO 202 Human Anatomy and Physiology II	4
CIS 118 Introduction to PC Applications	3
(or COM 125 Interpersonal Communication)	
ENG 121 English Composition I	3
(or ENG 131 Technical Writing I)	
MAT 107 Career Mathematics (or higher)	3
PSY 101 General Psychology I	3
Total Required General Education Credits	**20**
Total Required Credits for AAS Degree	**63**

Pharmacy Technician - Certificate

Code: F_CER_PHT2   Campus: Westminster

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 099 (or above), and REA 090 (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), lab coat (for community rotation), and immunizations prior to externships.

Program Admission Requirements:

1. Completion of an application for admission.
2. Completion of program entrance requirements.
3. Possess a GED or high school diploma.
4. Demonstrate keyboarding skills of 25 WPM or higher.
5. No previous conviction for a drug-related crime.
6. Submission of a résumé and a letter of reference.
7. Complete criminal background check at student's expense.
8. Completion of a PHT health summary with documented immunization records prior to clinical rotations.
9. Complete an interview with the program director.

Assessment testing is required of all students. Students who are reading at the college level, and place into ENG 121 and MAT 090 (or above) may begin this program of study.

REQUIRED COURSES	CREDITS
PHT 111 Orientation to Pharmacy	3
PHT 112 Pharmacy Law	2
PHT 113 Pharmacy Calculations and Terminology	1
PHT 114 Computer Skills for Pharmacy Technicians	1
PHT 115 Pharmacology of the GI, Renal, Reproductive, Immune, Dermatologic Systems	3
PHT 116 Institutional Pharmacy	3
PHT 117 Communication for Pharmacy Technicians	1
PHT 118 Pharmacology of the Nervous, Endocrine, Musculoskeletal Systems	3
PHT 119 Community Pharmacy	3
PHT 120 Medical Insurance Procedures	1
PHT 170 Pharmacy Clinical: Hospital	4
PHT 171 Pharmacy Clinical: Community	4
Total Credits Required for Certificate	**29**

Phlebotomy - Certificate

Code: F_CER_PHLB   Campus: Larimer

This certificate is designed to provide the student with entry-level skills required for employment as a phlebotomist. HPR 112 and 113 are corequisites. HPR 113 is the clinical portion and the student will complete 100 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 113 will qualify the student to sit for a national certifying exam. Students are required to have immunizations, 2 MMR and a current TB test.

REQUIRED COURSES	CREDITS
HPR 112 Phlebotomy	4
HPR 113 Advanced Phlebotomy	4
Total Credits Required for Certificate	**8**

Teacher Education

(See Elementary Education or Early Childhood Education for Transfer)

Teaching English as a Second Language (TESL) - Certificates

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 receiving a 95 or higher on Accuplacer sentence skills. International students seeking admission to the program are required to have a minimum score of 475 on the paper/pencil TOEFL test, or 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), MAT 090 (or above), and REA 090 (or above) may begin this program of study.

Teaching English as a Second Language Certificate Abroad (TESL-A)

Code: F_CER_TESL   Campus: Boulder County

REQUIRED COURSES	CREDITS
EDU 134 Teaching English as a Second Language to Adult Learners	3
TEL 100 TESL (Teaching English as a Second Language) English Study	3
TEL 102 Procedures and Techniques for the ESL Classroom	3
TEL 103 Career Strategies for the TESL Workplace	1
TEL 188 TESL Teaching Practicum (TESL-A)	2
TEL 225 Second Language Acquisition	3
Total Required Credits for Certificate	**15**

Teaching English as a Second Language Certificate K-12 (TESL-K)

Code: F_CER_ESLK   Campus: Boulder County

REQUIRED COURSES	CREDITS
EDU 275 Special Topics	3
TEL 100 English Study	3
TEL 102 Procedures and Techniques for the ESL Classroom	3

TEL 188 TESL Teaching Practicum (TESL-K)	3
TEL 225 Second Language Acquisition	3
Total Required Credits for Certificate	**15**

Veterinary Technology - Associate of Applied Science Degree

Code: F_AAS_VET2   *Campus: Larimer*

Assessment testing is required for all students. Students who place into ENG 090 (or above), MAT 090 (or above), and REA 090 (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 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.

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 full-time private practice internship is required. 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 or completion of preparatory coursework.

3. Completion of ENG 131 Technical Writing I or ENG 121 English Composition I with a grade of "C" or above.

4. Completion of BIO 111 General College Biology I with a grade of "C" or above (no more than seven years old).

5. Completion of an Intent to Enroll application form available at the Larimer Campus.

6. Completion of HPR 178 Medical Terminology, with a grade of "C" or above.

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. Students admitted to the Laboratory Animal Technology (ALT) program may enroll in VET 116 and 205.

All courses must be completed with a grade of "C" or above prior to graduation.

Assessment testing is required for all students. Students who are reading at the college level, and place into ENG 090 (or above), MAT 090 (or above) and REA 090 (or above), may begin this program of study.

REQUIRED COURSES	CREDITS
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	4
VET 250 Clinical Competency Evaluation	1
VET 280 Internship	11
Total Required Credits	**55**

REQUIRED GENERAL EDUCATION COURSES	CREDITS
BIO 111 General College Biology I with Lab	5
COM 125 Interpersonal Communication *(or COM 115 Public Speaking - 3 cr.)*	3
* ENG 131 Technical Writing I or ENG 121 English Composition I	3
HPR 178 Medical Terminology	1
* MAT 107 Career Mathematics	3
Arts and Humanities or Social and Behavioral Sciences Elective**	3
Total Required General Education Credits	**18**
Total Required Credits for AAS Degree	**73**
ELECTIVE COURSES (OPTIONAL)	CREDITS
VET 181 Internship: Laboratory Animal Technology	2

*Note: * 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.*

*** Electives must be selected from the Approved General Education Electives List for the AAS degree.*

Welding Technology - Associate of Applied Science Degree

Code: F_AAS_WTE   *Campus: Larimer*

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.

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 place into ENG 090 (or above), MAT 090 (or above), and REA 090 (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 new welding students must contact the welding program for advising in Room RP120 at Larimer, or call 970-204-8301.

REQUIRED COURSES	CREDITS
MTE 110 Manufacturing Communication and Teamwork	3
WEL 100 Safety for Welders	1
WEL 103 Basic Shielded Metal Arc I	4
WEL 104 Basic Shielded Metal Arc II	4
WEL 106 Blueprint Reading for Welders & Fitters	4
WEL 110 Advanced Shielded Metal Arc I	4
WEL 113 Oxyfuel and Plasma Cutting	2
WEL 114 Oxyacetylene Welding	2
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
Elective: AEC, ASE, ELT, EGT, MAC, TEC, WEL	1
Total Required Credits	45

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 131 Technical Writing I	3
MAT 107 Career Mathematics	3
PHY 105 Conceptual Physics	4
General Studies Elective*	3
Social and Behavioral Sciences or Arts and Humanities Elective*	3
Total Required General Education Credits	16
Total Required Credits for AAS Degree	61

Note: The Pipe Code Welding certificate may be substituted for 12 welding credits with welding faculty advisor approval.

* Electives must be selected from the Approved General Education Electives List for the AAS degree.

Welding Technology - Certificates

Comprehensive Welding Certificate

Code: F_CER_WTEC   Campus: Larimer

REQUIRED COURSES	CREDITS
WEL 100 Safety for Welders	1
WEL 103 Basic Shielded Metal Arc I	4
WEL 104 Basic Shielded Metal Arc II	4
WEL 106 Blueprint Reading for Welders & Fitters	4
WEL 110 Advanced Shielded Metal Arc I	4
WEL 113 Oxyfuel and Plasma Cutting	2
WEL 114 Oxyacetylene Welding	2
WEL 124 Introduction to Gas Tungsten Arc	4

Welding	
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
Total Required Credits for Certificate	41

Gas Metal Arc Welding (MIG) Certificate

Code: F_CER_WTEM   Campus: Larimer

REQUIRED COURSES	CREDITS
WEL 100 Safety for Welders	1
WEL 125 Introduction to Gas Metal Arc Welding	4
WEL 225 Advanced Gas Metal Arc Welding	4
Total Required Credits for Certificate	9

Gas Tungsten Arc Welding (TIG) Certificate

Code: F_CER_WTET   Campus: Larimer

REQUIRED COURSES	CREDITS
WEL 100 Safety for Welders	1
WEL 124 Introduction to Gas Tungsten Arc Welding	4
WEL 224 Advanced Gas Tungsten Arc Welding	4
Total Required Credits for Certificate	9

Oxyacetylene Welding Certificate

Code: F_CER_WTEO   Campus: Larimer

REQUIRED COURSES	CREDITS
WELl 100 Safety for Welders	1
WEL 113 Oxyfuel and Plasma Cutting	2
WEL 114 Oxyacetylene Welding	2
Total Required Credits for Certificate	5

Pipe Code Welding Certificate

Code: F_CER_WTEP   Campus: Larimer

REQUIRED COURSES	CREDITS
WEL 100 Safety for Welders	1
WEL 230 Pipe Welding I	4
WEL 231 Pipe Welding II	4
WEL 240 Pipe Welding Certification	4
Total Required Credits for Certificate	13

Sculptural Welding Certificate

Code: F_CER_WTED   Campus: Larimer

REQUIRED COURSES	CREDITS
ART 121 Drawing I	3
ART 132 3-D Design	3
ART 154 Sculpture 1	3
ART 275 Blacksmithing	3
CAD 101 Computer-Aided Drafting I	3
CAD 102 Computer-Aided Drafting II	3
WEL 100 Safety for Welders	1
WEL 113 Oxyacetylene Cutting	2
WEL 114 Oxyacetylene Welding	2

WEL 124 TIG Welding	4
WEL 275 Special Topics: Sculptural Welding	3
WEL 289 Capstone	1
Choose one of the following:	3
CAD 202 Computer-Aided Drafting/3D	
or CAD 240 Inventor I/AutoDesk	
or CAD 255 Solid Works/Mechanical	
Total Required Credits for Certificate	**34**

Shielded Metal Arc Welding Certificate

Code: F_CER_WTES
Campus: Larimer

REQUIRED COURSES	*CREDITS*
WEl 100 Safety for Welders	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 Required Credits for Certificate	**13**

Welding Fundamentals Certificate

Code: F_CER_WTEF
Campus: Larimer

REQUIRED COURSES	*CREDITS*
Select a minimum of 6 credits from the following:	
WEl 100 Safety for Welders	1
WEL 103 Basic Shielded Metal Arc I	4
WEL 104 Basic Shielded Metal Arc II	4
WEL 113 Oxyfuel and Plasma Cutting	2
WEL 124 Introduction to Gas Tungsten Arc Welding	4
WEL 125 Introduction to Gas Metal Arc Welding	4
Total Required Credits for Certificate	**7**

Course Offerings

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.

- 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.

Not all courses are offered each term at every site. Please refer to the current Schedule of Courses at *www.frontrange.edu*.

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.

In addition, guaranteed transfer courses are identified by the designations in the chart below.

AH - Arts and Humanities

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

CO - Communications

CO1 - Introductory Writing Course
CO2 - Intermediate Writing Course

HI - History

No subcategories

MA - Mathematics

No subcategories

SC - Physical and Life 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 170-174, 270-274 CLINICAL

Offers the clinical practicum to apply the related theory.
(22.5-45 Contact Hours PER CREDIT)

XXX 175-177, 275-277 SPECIAL TOPICS

Provides students with a means to pursue in-depth exploration of special topics of interest.
(Contact Hours VARY)

XXX 178-179, 278-279 SEMINAR/WORKSHOP

Provides students with select areas of study within a program of study.
(15 Contact Hours PER CREDIT)

XXX 180-184, 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.
(45 Contact Hours PER CREDIT)

XXX 185, 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.
(30 Contact Hours PER CREDIT)

XXX 187, 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.
(45 Contact Hours PER CREDIT)

XXX 188, 288: PRACTICUM

Provides the learner the opportunity for the practical application of classroom theory within a given program of study.
(30 Contact Hours PER CREDIT)

XXX 289: CAPSTONE

Focuses on demonstrated culmination of learning within a given program of study.
(15-45 Contact Hours PER CREDIT)

AAA - Advancement of Academic Achievement

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.
45 Contact Hours.

AAA 095 MATH HELPS (1)

Provides students with the opportunity to supplement their 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.
45 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.
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.
45 Contact Hours. Prerequisite: None

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.
45 Contact Hours. Prerequisite: ACC 101 or ACC 121

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.
60 Contact Hours.

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.
60 Contact Hours. Prerequisite: ACC 121.

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.
45 Contact Hours. Prerequisite: ACC 121

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.
45 Contact Hours. Prerequisites: ACC 122 and CIS 155.

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.
60 Contact Hours. Prerequisite: ACC 122.

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.
60 Contact Hours. Prerequisite: ACC 211.

ACC 216 GOVERNMENT AND 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.
45 Contact Hours. Prerequisites: ACC 122

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.
45 Contact Hours. Prerequisite: ACC 122.

ACC 227 COST ACCOUNTING II (3)

Continues ACC 226 and focuses on the decision making aspects of managerial accounting using electronic spreadsheet applications for assigned problems. Topics include product pricing strategy, capital budgeting, statement of cash flow, and application of linear programming.
45 Contact Hours. Prerequisites: ACC 226.

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.

45 Contact Hours. Prerequisite: ACC 121

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.

45 Contact Hours. Prerequisite: ACC 101 or ACC 121

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.

45 Contact Hours. Prerequisite: ACC 131

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.

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.

45 Contact Hours per credit. Prerequisites: To be determined by the instructor

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. Simple financial analysis using spreadsheet capabilities and written report skills are included. The student works independently of a traditional classroom setting.

15 Contact Hours. Prerequisites: ACC 122, ACC 135, and ACC 245 and semester of graduation.

ACC 294 SERVICE LEARNING (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.

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.

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.

90 Contact Hours. Prerequisite: AEC 101, CAD 101 and CAD 102.

AEC 103 COMPUTER APPLICATIONS IN AEC (3)

An advanced level experience in using a personal computer as a tool for solving technical problems and performing office functions. Applications involving spreadsheet, CAD, word processing, and project management software and the Internet are used to solve analytical problems and develop technical communiqués, graphs, bills of materials and reports.

68 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.

68 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.

45 Contact Hours. Prerequisite: AEC 121.

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.

90 Contact Hours. Prerequisites: AEC 101, AEC 102 and CAD 102.

AEC 131 ESTIMATING I: QUANTITY SURVEY (3)

Studies material computation methods used to estimate building construction material and equipment quantities. Preparation of material and equipment lists and takeoff quantities from drawings and specifications are introduced through student project work.

90 Contact Hours. Prerequisite: AEC 102. Corequisites: AEC 121 and AEC 122.

AEC 141 CIVIL CONSTRUCTION MATERIALS (5)

And investigation of the composition, properties and testing of heavy/civil construction materials including soils, aggregates, Portland cement, concrete, asphaltic/bituminous materials, ferrous and nonferrous metals, and structural timber. Laboratory experiments are performed to supplement lecture topics, including applied testing of Portland cement, concrete, steel, aluminum and asphalt.

113 Contact Hours. Prerequisite: AEC 121.

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.

68 Contact Hours. Prerequisites: AEC 121 and AEC 123

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.

68 Contact Hours. Prerequisites: MAT 121

AEC 206 APPLIED STRUCTURAL ANALYSIS (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.

68 Contact Hours. Prerequisites: AEC 121, MAT 107 or higher, and TEC 210

AEC 208 BUILDING ELECTRICAL SYSTEMS (2)

Surveys fundamental design principles, technology, and drawings of basic electrical distribution practices and artificial lighting systems in buildings. Students apply basic electrical theory, electrical code requirements and design principles in developing electrical construction drawings.

45 Contact Hours. Prerequisites: AEC 121, AEC 123, AEC 200, and MAT 107

AEC 210 BUILDING MECHANICAL SYSTEMS (4)

Focuses on fundamental principles, technology, and drawings related to building plumbing and heating, ventilating and air conditioning (HVAC) systems in buildings. Students apply fundamental heat transfer and fluid mechanics principles, code requirements and design principles in producing construction drawings of plumbing and HVAC systems in buildings.

90 Contact Hours. Prerequisites: AEC 121, AEC 123, AEC 200 and MAT 107 or higher

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.

68 Contact Hours. Prerequisites: AEC 121 and MAT 122.

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.

68 Contact Hours. Prerequisites: AEC 102 and AEC 121

AEC 221 BUILDING ELECTRICAL/MECHANICAL SYSTEMS (3)

Acquaints the student with electrical and mechanical equipment and systems in buildings. Lectures cover the basic principles of electrical distribution, artificial lighting, fire protection, plumbing systems and heating, ventilating and air conditioning (HVAC) systems.

68 Contact Hours. Prerequisites: AEC 102 and AEC 121.

AEC 223 CIVIL CONSTRUCTIONS SYSTEMS (3)

An Introductory study of planning, design, construction and operation principles related to heavy/civil construction projects including earthwork, structures, highways, streets, and roads, bridges, tunnels, railways, airports, and urban mass transit systems. Computation, drawing interpretation and route surveying exercises are performed to supplement lecture topics.

68 Contact Hours. Prerequisite: AEC 141

AEC 224 CIVIL WATER/ENVIRONMENTAL SYSTEMS (3)

A study of water supply and treatment, wastewater collection and treatment, storm water control, waste management and pollution control. Computations on hydraulics, hydrology, water supply and sewer lines, and overland and ditch drainage are introduced.

68 Contact Hours. Prerequisite: AEC 121

AEC 231 ESTIMATING II: COST ANALYSIS (3)

Focuses on estimating techniques used to establish and verify costs of materials, equipment, and labor and the time requirements related to building construction projects. Emphasis is placed on preparation of an estimate of construction costs of a commercial building.

68 Contact Hours. Prerequisites: AEC 131 and CIS 118.

AEC 232 CONSTRUCTION PROJECT MANAGEMENT (3)

Investigates building construction management principles including a study of systematic scheduling techniques, project tracking and control methods, and budget and cost analysis and control.

68 Contact Hours. Prerequisite: AEC 131. Corequisite: AEC 231.

AEC 233 CONSTRUCTION SAFETY AND LOSS PREVENTION (2)

Explores construction site hazards and unsafe practices, related health and safety regulations and standards, and loss and theft prevention. Training in basic first aid and CPR is included.

45 Contact Hours. Prerequisites: AEC 121 and AEC 122.

AEC 234 CONSTRUCTION CONTRACT AND LABOR LAW (2)

Focuses on construction labor, contract and licensing laws and regulations. Lectures and student projects investigate building construction project contracts and labor and employment regulations as related to building construction.

45 Contact Hours. Prerequisites: AEC 121 and AEC 122.

AEC 241 INTRODUCTORY STEEL DETAILING (3)

An introductory course in structural steel detailing of commercial and industrial buildings. Topics include structural steel, assemblies (i.e., angle frames, handrails, ladders, and stairs), framing plans, anchor bolt plans, shop drawings and erection drawings. Emphasis is placed on fabrication methods and use of standard load tables in AISC, JI and SDI manuals in selecting steel beams, lintels, columns, joists, and deck used in roof and floor systems.

68 Contact Hours. Prerequisites: AEC 121, AEC 123 AND CAD 202. Corequisites: TEC 210, AEC 206.

AEC 242 ADVANCED STEEL DETAILING (3)

An advanced course in structural detailing involving application of current design standards. Emphasis is on connection design and designing basic structural components such as beams, columns, and cross bracing systems. Work will involve computations, tabular data, and an introduction to computer modeling with intelligent structural detailing software.

68 Contact Hours. Prerequisites AEC 121, AEC 123 and CAD 202. Corequisites: TEC 210, AEC 206.

AEC 243 COMPUTERIZED STEEL DETAILING (3)

An advanced course in structural detailing in computer modeling of steel framed structures. Emphasis is on integrating detailing and design principles with intelligent structural detailing software.

68 Contact Hours. Prerequisite: AEC 242.

See the list of Specialized Architectural Engineering & Construction Technology Courses on the first page of this Course Offerings section.

AEC 289 CAPSTONE (3)

Focuses on a demonstrated culmination of learning within a given program of study.

68 Contact Hours. Prerequisites: AEC 121, AEC 122 and AEC 123.

AIR - Air Force ROTC

AIR 101 THE AIR FORCE TODAY 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.

38 Contact Hours. Prerequisite: Permission of instructor.

AIR 102 THE AIR FORCE TODAY II (1)

Continues the topics of AIR 101.

38 Contact Hours. Prerequisite: AIR 101

AIR 201 DEVELOPMENT OF AIR POWER I (1)

Studies air power from balloons and dirigibles through the jet age and historically reviews air power employment in military and nonmilitary operations in support of national objectives.

Looks at the evolution of air power concepts and doctrine and introduces the development of communicative skills.

38 Contact Hours. Prerequisite: AIR 102

AIR 202 DEVELOPMENT OF AIR POWER II (1)

Continues the topics discussed in AIR 201.

38 Contact Hours. Prerequisite: AIR 201

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.

45 Contact Hours. Prerequisite: None

ALT 226 ANIMAL CARE AND MANAGEMENT (3)

Expands and builds on topics covered in Introduction to Laboratory Animal Science. Emphasizes hands on care and management of animals currently used in biomedical research. Course highlights th feeding, breeding, health maintenance, and housing of various species. The foundation of skills necessary for Certification in Laboratory Animal Science is a focus.

45 Contact Hours. Prerequisite: None

ALT 265 ASSISTANT LAT CERTIFICATION EXAM PREPARATION (2)

Prepares students that meet the education and work requirements that qualify them for the Assistant Laboratory Animal Technician certification exam. Students will review skills and knowledge determined by the American Association of Laboratory Animal Science necessary to meet minimum competency.

30 Contact Hours. Prerequisite: None

ALT 266 LAB ANIMAL TECHNICIAN CERTIFICATION EXAM (2)

The basic principles of husbandry, facility management, and animal health and welfare covered in the ALAT preparation will be reinforced as well as advanced techniques   A more detailed understanding of welfare regulations will be emphasized. Note : the work requirements are greater than those set for the LAT exam and students must meet these before enrolling.

30 Contact Hours. Prerequisite: None

See the list of Specialized Animal Laboratory Technology Courses on the first page of this Course Offerings section.

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.

45 Contact Hours per credit.   Prerequisite: None

ANT - Anthropology

ANT 101 CULTURAL ANTHROPOLOGY (3)

*(GT-SS3)

Studies human cultural patterns and learned behavior. Includes linguistics, social and political organization, religion, culture and personality, culture change, and applied anthropology.
45 Contact Hours.

ANT 106 ETHNOGRAPHY OF THE DEAF COMMUNITY (3)

Applies ethnographic methods and principles to deaf heritage and community. Focus is on adaptations that deaf people use to interact with one another and the hearing world.
45 Contact Hours.

ANT 107 INTRODUCTION TO ARCHAEOLOGY (3)

*(GT-SS3)

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.
45 Contact Hours.

ANT 111 PHYSICAL ANTHROPOLOGY (3)

*(GT-SS3)

Studies human biology and its effects on behavior. Includes principles of genetics and evolution, vertebrates and primates, human origins, human variation, and ecology.
45 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.
45 Contact Hours.

ANT 201 INTRO 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.
45 Contact Hours.

ANT 215 INDIANS OF NORTH AMERICA (3)

*(GT-SS3)

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.
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.
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.
45 Contact Hours. Prerequisite: None

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.
45 Contact Hours. Prerequisite: ENG 121

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.
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.
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 of yellow perch as well as other species of fish. 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.
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.
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.

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.

45 Contact Hours.

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.

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.

75 Contact Hours. Prerequisite: ARA 111

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.

45 Contact Hours.

ARM - Army ROTC

ARM 111 ADVENTURES IN LEADERSHIP I (2)

Introduces the student to 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.

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.

30 Contact Hours. Prerequisite: ARM 111

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.

45 Contact Hours. Prerequisite: ARM 112 or permission of instructor.

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.

45 Contact Hours. Prerequisite: ARM 211

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.

45 Contact Hours.

ART 110 ART APPRECIATION (3)

*(GT-AH1)

Introduces the cultural significance of the visual arts, including media, processes, techniques, traditions, and terminology.

45 Contact Hours.

ART 111 ART HISTORY ANCIENT TO MEDIEVAL (3)

*(GT-AH1)

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.

45 Contact Hours.

ART 112 ART HISTORY RENAISSANCE TO MODERN (3)

*(GT-AH1)

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.

45 Contact Hours.

ART 113 HISTORY OF PHOTOGRAPHY (3)

Surveys the history of photography form 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.

45 Contact Hours.

ART 117 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.

90 Contact Hours.

ART 120 PAPERMAKING (3)

Introduces students to the background and process of papermaking from an academic studio perspective using a variety of materials. Students prepare their own papers and

create and/or acquire their own collection of tools and equipment for making paper.
90 Contact Hours.

ART 121 DRAWING I (3)

Investigates the various approaches and media that students need to develop drawing skills and visual perception.
90 Contact Hours.

ART 122 DRAWING II (3)

Explores expressive drawing techniques with an emphasis on formal composition, color media and content or thematic development.
90 Contact Hours. Prerequisite: ART 121

ART 123 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.
90 Contact Hours. Prerequisite: ART 121 or ART 131

ART 124 WATERCOLOR II (3)

Continues the study of watercolor techniques, emphasizing original compositions and experimentation with materials. Color theory is included.
90 Contact Hours. Prerequisite: ART 123

ART 125 LANDSCAPE DRAWING I (3)

Emphasizes nature, particularly landscape. Drawing outside or in view of landscape using graphite, ink, prismacolor, pastel, and washes. Students concentrate on various approaches, viewpoints, and styles and acquire expertise and interpretation in a variety of media.
90 Contact Hours. Prerequisite: ART 121

ART 126 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.
90 Contact Hours. Prerequisite: ART 125

ART 127 DRAWING ANIMALS (3)

Emphasizes bird, reptile and mammal species using a variety of 2-dimensional media.
90 Contact Hours. Prerequisite: ART 121

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.
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.
90 Contact Hours.

ART 135 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.

90 Contact Hours.

ART 138 PHOTOGRAPHY I (3)

Introduces black and white photography as a fine art medium and develops skills necessary for basic camera and lab operations.
90 Contact Hours.

ART 139 PHOTOGRAPHY II (3)

A further exploration in camera and lab operations with an emphasis on individual creativity. It includes the development of a comprehensive portfolio.
90 Contact Hours. Prerequisite: ART 138

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: 90 Contact Hours. Prerequisite: ART 138

ART 141 JEWELRY AND METAL WORK I (3)

Introduces the construction of jewelry designs in metals and small casting techniques.
90 Contact Hours.

ART 142 JEWELRY AND METAL WORK II (3)

Emphasizes conceptual design development, using casting and specialized techniques.
90 Contact Hours. Prerequisite: ART 141

ART 143 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.
90 Contact Hours.

ART 144 NON-SILVER PROCESSES (1)

Explores several non-silver photographic processes including the Platinotype, Cyanotype, and Van Dyke Brown printing techniques. Production of enlarged negatives from 35mm negatives and transparencies as required for contact printing for these processes.
90 Contact Hours. Prerequisite: ART 138

ART 146 STAINED GLASS I (3)

Develops a basic understanding and approach to stained glass. Students gain an understanding of and appreciation for the properties of glass and the nature of finished stained glass construction.
90 Contact Hours. Prerequisite: ART 131.

ART 149 ANIMATION DRAWING AND DESIGN (3)

Students learn the foundational skills necessary to create characters for use in computer-based animation courses. Students learn to draw human and animal forms using pencil and paper. Character development, anatomy, dynamic movement and action, and scenery are emphasized.
90 Contact Hours.

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.

90 Contact Hours.

ART 151 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.

90 Contact Hours. Prerequisite: Art 150

ART 154 SCULPTURE I (3)

Introduces the fundamentals of sculpture such as modeling, casting, carving, and the processes of assemblage.

90 Contact Hours. Prerequisite: ART 132

ART 155 SCULPTURE II (3)

Develops an understanding and focus on manipulation of three-dimensional form, with greater concentration on individual creativity and style.

90 Contact Hours. Prerequisite: ART 154

ART 156 FIGURE DRAWING I (3)

Introduces the basic techniques of drawing the human figure.

90 Contact Hours. Prerequisite: ART 121

ART 157 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.

90 Contact Hours. Prerequisite: ART 156

ART 161 CERAMICS I (3)

Introduces traditional and contemporary ceramic forms and processes including hand building and throwing on the potter's wheel.

90 Contact Hours.

ART 162 CERAMICS II (3)

A continuation of ART 161, this course emphasizes skill, technique and form.

90 Contact Hours. Prerequisite: ART 161

ART 163 HANDBUILT CLAY I (3)

Provides instruction in several methods of hand building and the study of functional and decorative design elements.

90 Contact Hours.

ART 164 HANDBUILT CLAY II (3)

Provides continued instruction in various methods of hand building.

90 Contact Hours. Prerequisite: ART 163

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.

45 Contact Hours.

ART 207 ART HISTORY - 1900 TO PRESENT (3)

*(GT-AH1)

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.

45 Contact Hours.

ART 210 LANDSCAPE PAINTING (3)

Focuses on specific landscape concerns in the painting media of the student's choice.

90 Contact Hours. Prerequisites: ART 121

ART 211 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.

90 Contact Hours. Prerequisites: ART 131

ART 212 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.

90 Contact Hours. Prerequisite: ART 121 and/or ART 131

ART 213 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.

90 Contact Hours. Prerequisite: ART 212

ART 214 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.

90 Contact Hours. Prerequisite: ART 213

ART 219 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.

90 Contact Hours.

ART 221 DRAWING III (3)

Offers a continued study of expressive drawing techniques and development of individual style, with an emphasis on composition and technique variation.

90 Contact Hours. Prerequisites: ART 122

ART 222 DRAWING IV (3)

Explores advanced drawing problems with an emphasis on conceptual development and portfolio and/or exhibition quality presentation.

90 Contact Hours. Prerequisites: ART 221

ART 223 WATERCOLOR III (3)

Concentrates on the advanced study of subject development, form, color, and theme in watercolor.

90 Contact Hours. Prerequisite: ART 124

ART 224 WATERCOLOR IV (3)

Concentrates on the advanced study of techniques, individual style or expression, and consistency of compositional problem solving in watercolor.

90 Contact Hours. Prerequisite: ART 223

ART 225 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.

90 Contact Hours. Prerequisites: ART 121 or ART 131

ART 226 ADVANCED PRINTMAKING (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.

90 Contact Hours. Prerequisite: ART 225

ART 227 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.

90 Contact Hours.

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.

90 Contact Hours. Prerequisite: ART 131.

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.

90 Contact Hours. Prerequisite: ART 132.

ART 235 FIBER DESIGN II (3)

Continues instruction in fiber design (ART 135 Fiber Design I).

90 Contact Hours. Prerequisite: ART 135

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.

90 Contact Hours. Prerequisite: ART 139.

ART 239 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.

90 Contact Hours. Prerequisite: ART 140

ART 240 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.

90 Contact Hours. Prerequisite: ART 138

ART 241 JEWELRY AND METALWORK III (3)

Focuses upon advanced work and emphasizes experimentation with materials and techniques, individual designs, and superior craftsmanship.

90 Contact Hours. Prerequisite: ART 142

ART 242 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.

90 Contact Hours. Prerequisite: ART 241

ART 243 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.

90 Contact Hours. Prerequisite: ART 143

ART 244 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.

90 Contact Hours.

ART 248 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.

60 Contact Hours. Prerequisite: ART 138

ART 250 ART OF ANIMATION (3)

Introduces character development and transitions from one media to another. Students learn the foundational skills necessary to create the illusion of life for sketched characters. Focuses on the traditional medium of paper and pencil to turn ideas into visual treatment for creating animatics by use of a light box and computer. Character development and storyboarding by script are emphasized.

90 Contact Hours.

ART 251 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.

90 Contact Hours. Prerequisite: ART 138

ART 252 LANDSCAPE PHOTOGRAPHY (2)

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.
90 Contact Hours. Prerequisite: ART 138

ART 253 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.
90 Contact Hours. Prerequisite: ART 138

ART 254 SCULPTING THE FIGURE (3)

Focuses on sculpting the human figure using modeling techniques in clay.
90 Contact Hours. Prerequisite: None

ART 256 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.
90 Contact Hours. Prerequisite: ART 156

ART 257 ADVANCED FIGURE PAINTING (3)

Offers continued study of painting the human figure with advanced problem solving in composition and experimentation with materials and techniques.
90 Contact Hours. Prerequisite: ART 157

ART 259 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.
90 Contact Hours.

ART 261 CERAMICS III (3)

Encourages students to develop an individual style of wheel thrown and hand built ceramic forms with continuing involvement in surface treatment.
90 Contact Hours. Prerequisite: ART 162

ART 262 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.
90 Contact Hours. Prerequisite: ART 261

ART 263 HANDBUILT CLAY III (3)

Covers advanced problems with importance placed on large-scale pieces that promote creativity with techniques and combinations of different textures.
90 Contact Hours. Prerequisite: ART 164

ART 268 SCULPTURE III (3)

Focuses on advanced individual sculpture projects, emphasizing experimentation with materials, accomplished technique and conceptual significance.
90 Contact Hours. Prerequisite: ART 155

ASC   - Animal Sciences

ASC 100 ANIMAL SCIENCES (3)

Studies the basic fundamentals of livestock production pertaining to principles of breeding, genetics, nutrition, health, and physiology of beef, sheep, swine, dairy, and horses. Focuses on the Animal Science Industry in general and each

species industry in regard to history, current situation, and future direction.
45 Contact Hours.

ASE   - Auto Service Technology

ASE 101 AUTO 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.
45 Contact Hours.

ASE 110 BRAKES I (3)

Covers basic operation of automotive braking systems. Includes operation, diagnosis, and basic repair of disc brakes, drum brakes, and basic hydraulic systems.
68 Contact Hours. Prerequisite: ASE 101

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.
45 Contact Hours. Prerequisite: ASE 101

ASE 123 BATTERY, STARTING AND CHARGING SYSTEMS (2)

Covers the operation, testing, and servicing of vehicle battery, starting, and charging systems. Includes voltage and amperage testing of starter and generator, load testing and maintenance of a battery, and starter and generator overhaul.
45 Contact Hours. Prerequisite: ASE 101, ASE 120,

ASE 130 GENERAL ENGINE DIAGNOSIS (2)

Focuses on lecture and related laboratory experiences in the diagnosis and necessary corrective actions of automotive engine performance factors.
45 Contact Hours. Prerequisite: ASE 101

ASE 132 IGNITION SYSTEM DIAGNOSIS AND REPAIR (2)

Focuses on lecture and related laboratory experiences in the diagnosis, service, adjustments and repair of various automotive ignition systems.
45 Contact Hours. Prerequisite: ASE 101, ASE 120, ASE 123,

ASE 134 AUTOMOTIVE EMISSIONS (2)

Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive emission control systems.
45 Contact Hours. Prerequisite: ASE 101, ASE 132,

ASE 140 SUSPENSION AND STEERING I (3)

Focuses on lecture and related experiences in the diagnosis and service of suspensions and steering systems and their components.
68 Contact Hours. Prerequisite: ASE 101

ASE 150 AUTOMOTIVE U-JOINT AND AXLE SHAFT SERVICE (2)

Studies the operating principles and repair procedures relating to axle-shaft and universal joints.
45 Contact Hours. Prerequisite: ASE 101

ASE 151 AUTOMOTIVE MANUAL TRANSMISSION/TRANSAXLES AND CLUTCHES (2)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive manual transmissions, transaxles and clutches and related components.

45 Contact Hours. Prerequisite: ASE 101

ASE 152 DIFFERENTIALS AND 4WD/AWD SERVICE (2)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive differentials, four wheel and all wheel drive units.

45 Contact Hours. Prerequisite: ASE 101

ASE 160 AUTOMOTIVE ENGINE REMOVAL AND INSTALLATION (1)

Focuses on lecture and laboratory experiences in the removal and installation procedures of the automotive engine from and into front wheel and rear wheel drive vehicles.

23 Contact Hours. Prerequisite: ASE 101

ASE 161 ENGINE, DISASSEMBLY DIAGNOSIS AND ASSEMBLY (5)

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.

113 Contact Hours. Prerequisite: ASE 101

ASE 210 BRAKES II (3)

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.

68 Contact Hours. Prerequisite: ASE 110

ASE 220 SPECIALIZED ELECTRONICS TRAINING (2)

Provides a systematic approach to automotive electrical systems. Builds from the basic electrical principles and concepts through semiconductors and microprocessors. Features on-bench exercises. Students practice diagnostic procedures that have applications to present and future automotive electronics and electrical systems.

45 Contact Hours. Prerequisite: ASE 101, ASE 120, ASE 123, ASE 132

ASE 221 AUTO/DIESEL BODY ELECTRICAL (4)

Provides a comprehensive study of the theory, operation, diagnosis, and repair of vehicle accessories.

90 Contact Hours. Prerequisite: ASE 101, ASE 120, ASE 123, ASE 132

ASE 231 AUTO/DIESEL COMPUTERS (2)

Focuses on lecture and laboratory experiences in the inspection and testing of typical computerized engine control systems.

45 Contact Hours. Prerequisites: ASE 101, ASE 120, ASE 123, ASE 132, ASE 134,

ASE 233 FUEL INJECTION AND EXHAUST SYSTEMS (4)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of electronic fuel injection systems and modern exhaust systems.

90 Contact Hours. Prerequisites: ASE 101, ASE 120, ASE 134
rmission of instructor.

ASE 235 DRIVABILITY DIAGNOSIS (1)

Emphasizes lecture and related laboratory experience in diagnostic techniques and the use of diagnostic scan tools, oscilloscopes, lab scopes, multi-meters and gas analyzers. Students diagnose live vehicle drive-ability problems.

23 Contact Hours. Prerequisite: ASE 101, ASE 233,

ASE 236 ADVANCED DRIVABILITY DIAGNOSIS/REPAIR (4)

Focuses on lecture and laboratory experiences in the inspection, testing and repair of typical computerized engine control systems on customer vehicles. Prerequisite: ASE 235 or permission of instructor.

90 Contact Hours. Westminster Only

ASE 240 SUSPENSION AND STEERING II (3)

Emphasizes lecture and related experiences in the diagnosis and service of electronic suspensions and steering systems and their components.

68 Contact Hours. Prerequisite: ASE 101, ASE 140,

ASE 250 AUTOMATIC TRANSMISSION/TRANSAXLE SERVICE (1)

Focuses on practical methods of maintaining, servicing, and performing minor adjustments on an automatic transmission and transaxle.

23 Contact Hours. Prerequisite: ASE 101

ASE 251 AUTOMATIC TRANSMISSION/TRANSAXLE DIAGNOSIS AND ASSEMBLIES (5)

Covers diagnosis, principles of hydraulics, principles of electronic components, power flow, theory of operation, removal of transmission/transaxle, tear down, replacement of components, measurement and subsequent adjustment of components and replacement of transmission/transaxle.

113 Contact Hours. Prerequisite: ASE 101, ASE 250

ASE 252 ADVANCED AUTOMATIC TRANSMISSIONS/TRANSAXLES (2)

Provides laboratory experiences with a variety of customer work in the areas that the student received training during previous automotive transmission classes.

45 Contact Hours. Prerequisite ASE 251

ASE 260 ADVANCED ENGINE DIAGNOSIS (2)

Focuses on lecture and related laboratory experiences in the diagnosis and necessary corrective actions of automotive engine performance factors related to customer vehicles.

45 Contact Hours. Prerequisite: ASE 161

ASE 265 HEATING AND AIR CONDITIONING (5)

Emphasizes lecture and related laboratory experiences in the diagnosis and service of vehicle heating and air conditioning systems and their components.

113 Contact Hours. Prerequisite: ASE 101

See the list of Specialized Auto Service Technology Courses on the first page of this Course Offerings section.

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.

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.

45 Contact Hours. Note: 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.

45 Contact Hours. Prerequisite: ASL 101. Note: 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.

75 Contact Hours. Note: 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.

75 Contact Hours. 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.

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.

75 Contact Hours. Prerequisite: ASL 122. Corequisite: ASL 125.

ASL 125 FINGERSPELLING (3)

Provides the student an opportunity to develop expressive and receptive finger spelling through various class activities.

45 Contact Hours. Prerequisite: ASL 122. Corequisite: ASL 123.

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.

45 Contact Hours. Prerequisites: ASL 123 and ASL 125.

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.

45 Contact Hours. Prerequisite: ASL 221.

AST   - Astronomy

AST 101 ASTRONOMY I (4)

*(GT-SC1)

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, comets, and meteoroids. Incorporates laboratory experience.

Prerequisite: MAT 090 with a grade of C or better.   75 Contact Hours. 45 lecture hours, 30 lab hours.

AST 102 ASTRONOMY II (4)

*(GT-SC1)

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.

75 Contact Hours. 45 lecture hours, 30 lab hours.   Prerequisite: MAT 090 with a grade of "C" or better or appropriate diagnostic scores.

AUT   - Auto Motorsports Technology

AUT 109 HIGH PERFORMANCE SUSPENSION AND CHASSIS DESIGN (2)

(Larimer Only)

Introduces the fundamentals of chassis types and components. 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.

45 Contact Hours. Prerequisite: ASE 101, ASE 140, ASE 240

AUT 119 HIGH PERFORMANCE ELECTRICAL AND FUEL (2)

(Larimer Only)

Introduces electrical and fuel systems as applied to racing vehicles. Includes carburetion, fuel injection, fuel pumps, fuel cells, ignition systems, switches, and wiring.

45 Contact Hours. Prerequisite: ASE 101, ASE 220, ASE 233

BIO   - Biology

BIO 105 SCIENCE OF BIOLOGY (4)

*(GT-SC1)

(Cannot be applied toward A.S. Degree)

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.

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.

60 Contact Hours.   High school biology and chemistry recommended.

BIO 111 GENERAL COLLEGE BIOLOGY I WITH LAB (5)

*(GT-SC1)

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.

90 Contact Hours (60 lecture hours, 30 lab hours).   High school biology and chemistry recommended.

BIO 112 GENERAL COLLEGE BIOLOGY II WITH LAB (5)

*(GT-SC1)

A continuation of General College Biology I. Includes ecology, evolution, classification, structure, and function in plants and animals. This course includes laboratory experience.

90 Contact Hours (60 lecture hours, 30 lab hours). Prerequisite: BIO 111.

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.

45 Contact Hours.

BIO 201 HUMAN ANATOMY AND PHYSIOLOGY I (4)

*(GT-SC1)

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 systems and special senses. Includes a mandatory hands-on laboratory experience covering experimentation, microscopy, observations, and dissection. This is the first semester of a two-semester sequence.

90 Contact Hours (45 lecture hours, 45 lab hours). Prerequisite: BIO 111 or a passing grade on the science placement test.

BIO 202 HUMAN ANATOMY AND PHYSIOLOGY II (4)

*(GT-SC1)

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.

90 Contact Hours (45 lecture hours, 45 lab hours). Prerequisite: BIO 201.

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.

60 Contact Hours

BIO 204 MICROBIOLOGY (4)

*(GT-SC1)

Examines microorganisms with an emphasis on their structure, development, physiology, classification, identification, and their role in infectious disease. The laboratory experience includes culturing, identifying, and controlling microorganisms.

90 Contact Hours (45 lecture hours, 45 lab hours). Prerequisite: BIO 111 or a passing grade on the science placement test.

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.

60 Contact Hours. Prerequisite: BIO 201 and BIO 202.

BIO 221 BOTANY (5)

*(GT-SC1)

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 hand-on laboratory and field experience.

90 Contact Hours (60 lecture hours, 30 lab hours).

BIO 222 GENERAL COLLEGE ECOLOGY (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.

90 Contact Hours (45 lecture hours, 45 lab hours). Prerequisites: BIO 111 and BIO 112 or equivalent.

BUS   - Business

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.

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.

45 Contact Hours.

BUS 120 INTRODUCTION TO E-COMMERCE (3)

Provides an introduction to electronic commerce-the 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.

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.
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.
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.
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.
45 Contact Hours. Prerequisite: MAT 099.

BUS 227 PRINCIPLES OF PURCHASING (3)

Focuses on the management of the purchasing activity and the control of materials in business, government and organizations.
45 Contact Hours.

See the list of Specialized Business Courses on the first page of this Course Offerings section.

BUS 281 INTERNSHIP (1-12)

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.
45 Contact Hours per credit. Prerequisite: To be determined by instructor.

BUS 289 CAPSTONE (1-6)

Demonstrates the culmination of learning within a given program of study.
15-90 Contact Hours.

CAD - Computer-Aided Drafting

CAD 100 BLUEPRINT READING FOR CAD (3)

Covers linetype identification, identification of symbols, linear dimensions, angular dimensions, arrowless dimensions, machine process callouts, drawing notes, ANSI/ASME/ISO dimensioning standards, tolerances, freehand sketching and reading working drawings.
68 Contact Hours.

CAD 101 COMPUTER-AIDED DRAFTING I (3)

Focuses on basic computer-aided drafting skills using the latest release of CAD software. Includes file management, Cartesian coordinate system, drawing set-ups, drawing aids, layer usage, drawing geometric shapes, editing objects, array, text applications, basic dimensioning, and Help access.
68 Contact Hours. Corequisite: AEC 101, ENT 131, or IND 112.

CAD 102 COMPUTER-AIDED DRAFTING II (3)

Focuses on advanced computer-aided drafting skills using the latest release of CAD software. Includes blocks and wblocks, polylines, multilines, polyline editing, advanced editing, editing with grips, hatching, isometric drawings, dimensions and dimension variables, paper space and viewports, templates, external references, and printing/plotting.
68 Contact Hours. Prerequisite: CAD 101

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.
68 Contact Hours.

CAD 201 COMPUTER-AIDED DRAFTING/CUSTOM (3)

Focuses on program customization using the latest release of CAD software. Includes customizing menus, customizing toolbars, attribute extraction, basic CAD programming, advanced dimensioning, path options, script files, and slide shows.
68 Contact Hours. Prerequisite: CAD 102

CAD 202 COMPUTER-AIDED DRAFTING/3D (3)

Focuses on construction of three-dimensional objects using the latest release of CAD software. Includes wire frame construction, surface modeling, solid modeling, extrusions, Boolean operations, 3D editing, 3D views, rendering, and 3D to 2D construction.
68 Contact Hours. Prerequisite: CAD 102

CAD 219 3D/MAX (3)

Introduces 3D rendering and animation using AUTODESK 3D Studio software. Emphasizes 3D geometry, texture mapping, lighting, camera placement, shading, photo-realistic rendering, animation techniques, and walk through animations.
68 Contact Hours. Prerequisite: CAD 102

CAD 220 3D/MAX ADVANCED (3)

Focuses on advanced rendering and animation techniques using AutoDesk 3D studio software. Emphasizes 3D-geometry manipulation, external processing and video postproduction of 3D studio animations.
68 Contact Hours. Prerequisite: CAD 219

CAD 224 REVIT (3)

Provides students with the software application training in AUTODESK REVIT necessary to produce 3D Architectural models and 2D drawings utilizing AIA standards.
68 Contact Hours. Prerequisites: AEC 102, CAD 102

CAD 225 ARCHITECTURAL DESKTOP/AUTODESK (3)

Provides students with the software application training in Architectural Desktop necessary to produce 3D architectural drawings utilizing 2D drafting skills.
68 Contact Hours. Prerequisites: AEC 102 and CAD 102

CAD 227 REVIT ADVANCED (3)

This course focuses on the advanced applications of the Revit software. Includes family editing, topographic site plans, worksharing, phases, advanced scheduling, custom annotation, and presentation techniques.
68 Contact Hours. Prerequisites: CAD 224

CAD 228 STEEL DETAILING (SDS/2) (3)

Introduces students to the world of steel fabrication through 3D parametrics. A small steel structure is completed using step-by-step instructions including 3D modeling, creating solids, sheet setups for automatic detailing, bill of material creation and plotting.
68 Contact Hours. Prerequisites: AEC 241, CAD 100, CAD 202

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.
68 Contact Hours. Prerequisite: CAD 224

CAD 231 LAND DESKTOP/AUTODESK (3)

Focuses on the basic command structure and applications of civil mapping concepts utilizing a civil software, to include data collection files, symbols libraries, setting attributes, COGO, layer control, surface modules, road calc, and site design. All coursework is completed on a CAD system.
68 Contact Hours. Prerequisites: CAD 102, ENT 131

CAD 233 CIVIL 3D/AUTODESK (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.
68 Contact Hours. Prerequisite: CAD 231, MAT 099

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.
68 Contact Hours. Prerequisite: CAD 102

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.
68 Contact Hours. Prerequisite: CAD 240

CAD 254 MECHANICAL DESKTOP/AUTODESK (3)

Examines 3D parametric solid modeling techniques. Students construct solid models and generate 2D mechanical drawings utilizing these models.
68 Contact Hours. Prerequisite: CAD 102, ENT 131

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.
68 Contact Hours. Prerequisite: CAD 102, ENT 131

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.
68 Contact Hours. Prerequisite: CAD 255

See the list of Specialized Computer-Aided Drafting Courses on the first page of this Course Offerings section.

CAD 289 CAPSTONE (1-6)

A demonstrated culmination of learning within a given program of study.
15 Contact Hours per credit.

CAR - Carpentry

CAR 133 CONSTRUCTION FRAMING AND SAFETY (4)

Utilizes hands-on techniques to illustrate basic framing methods and materials. Floor/Wall/and Roof framing will be discussed/demonstrated and taught. There will be extensive utilization of modern and western residential framing methods. The course will also include 10 hours of OSHA approved safety instruction, which will qualify the student for their 10-hour safety card.
90 Contact Hours.

CHE - Chemistry

CHE 101 INTRODUCTION TO CHEMISTRY I (5)

*(GT-SC1)
(cannot be applied toward AS degree)

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.
90 Contact Hours (60 lecture hours, 30 lab hours). Prerequisite: MAT 090 or high school algebra within the last 7 years.

CHE 102 INTRODUCTION TO CHEMISTRY II (5)

*(GT-SC1)

(cannot be applied toward AS degree)

Focuses on introductory organic and biochemistry (sequel to Introduction to Chemistry I). This course includes the study of hybridization of atomic orbitals for carbon, nomenclature of both organic and biochemical compounds, physical and chemical properties of various functional groups of organic chemistry, and physical and chemical properties of biochemical compounds along with their biochemical pathways. Laboratory experiments are included.

90 Contact Hours (60 lecture hours, 30 lab hours) Prerequisite: CHE 101.

CHE 105 CHEMISTRY IN CONTEXT (5)

*(GT-SC1)

(cannot be applied toward AS degree}

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.

90 Contact Hours.

CHE 111 GENERAL COLLEGE CHEMISTRY I (5)

*(GT-SC1)

Focuses on basic chemistry and measurement, matter, chemical formulas, reactions and equations, stoichiometry and thermochemistry. Covers the development of atomic theory culminating in the use of quantum numbers to determine electron configuraFocuses tions of atoms, and the relationship of electron configuration to chemical bond theory and molecular orbital theory. Includes gases, liquids, and solids. Problem-solving skills are emphasized. Incorporates laboratory experiments.

105 Contact Hours (60 lecture hours, 45 lab hours).   Prerequisite: CHE 101 or Equivalent within the last 7 years, or passing grade (65% or more) on the Chemistry placement test.   Co-requisite: MAT 121

CHE 112 GENERAL COLLEGE CHEMISTRY II (5)

*(GT-SC1)

Presents concepts in the areas of solution properties, chemical kinetics, chemical equilibrium, acid-base and ionic equilibrium, thermodynamics, electrochemistry, nuclear chemistry, and organic chemistry. Emphasizes problem solving skills and descriptive contents for these topics. Laboratory experiments demonstrate qualitative and quantitative analytical techniques.

105 Contact Hours (60 lecture hours, 45 lab hours). Prerequisites: CHE 111 within the last 7 years and MAT 121 within the last 7 years.

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.

105 Contact Hours (60 lecture hours, 45 lab hours). Prerequisites: CHE 101 within the last 7 years or CHE 112 within the last 7 years.

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.

105 Contact Hours (60 lecture hours; 45 lab hours). Prerequisite: CHE 112 within the last 7 years.

CHE 212 ORGANIC CHEMISTRY II WITH LAB (5)

Topics include structure, reactions and reaction mechanisms of aromatic compounds, and continuation of functional group families from CHE 211. Introduction to the chemistry of heterocycles and biologically related compounds, if time permits. Students demonstrate the above concepts and laboratory techniques.

105 Contact Hours (60 lecture hours; 45 lab hours). Prerequisite: CHE 211 within the last 7 years.

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.

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.

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.

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.

75 Contact Hours. Prerequisite: CHI 111

CIS   -   Computer Information Systems

CIS 110 INTRODUCTION TO THE PC (1)

Provides the beginning computer user with hands-on experience in the elementary use of the personal computer. This course introduces the basic features of and the terminology associated with personal computers, including topics such as database, spreadsheet, and word processing.

15 Contact Hours.

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.
45 Contact Hours.

CIS 118 INTRODUCTION TO PC APPLICATIONS (3)

Introduces computer concepts and components as well as application-suite software and the Internet. Includes descriptions of and hands-on experiences with word processing, spreadsheets, databases, operating environments and CIS.
45 Contact Hours.

CIS 128 WINDOWS COMPLETE (3)

Introduces the functions and capabilities of Microsoft Windows. Includes configuring and modifying the operating system environment.
45 Contact Hours.

CIS 130 INTRODUCTION TO THE INTERNET (1)

Enhances the student's knowledge of the Internet and its resources. Individuals learn terminology in dealing with the Internet. Includes privacy and copyright issues with information retrieved from the Internet. Students experience the use of e-commerce, multimedia and e-mail. Explores searching the Internet and credibility of information obtained with searches.
15 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 print 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.
45 Contact Hours. Prerequisite: CIS 128 or permission of instructor.

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.
45 Contact Hours. Prerequisite: 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.
45 Contact Hours. Prerequisite: CIS 145

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.
45 Contact Hours. Prerequisite: 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.
45 Contact Hours. Prerequisite: Knowledge of word processing.

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.
45 Contact Hours. Prerequisite: 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.
45 Contact Hours. Prerequisite: CIS 115

CIS 222 UNIX SYSTEM ADMINISTRATION (3)

Introduces the UNIX/Linux operating system and covers the skills required to install, configure and operate a UNIX/Linux system.
45 Contact Hours.

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.
45 Contact Hours. Prerequisite: CIS 115

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.
45 Contact Hours. Prerequisites: CIS 231 and one programming language

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.
45 Contact Hours.

CIS 243 INTRO TO PL/SQL (3)

Introduces students to creating database structures and storing, retrieving, and manipulating data in a relational database. SQL is the set of statements that all users and programs must use to access data in the Oracle database. Also focuses on SQL*Plus to manipulate SQL statements.
56 Contact Hours.

CIS 244 SQL PL/SQL (3)

Provides a detailed introduction to the Structured Query Language (SQL) as used in modern relational database systems. Students will develop skills in storing, retrieving and manipulating data using SQL as well as in defining database objects using the portion of SQL known as the Data Definition

Language (DDL). The course will also provide a detailed introduction to the PL/SQL programming language that is integral to some widely-used relational database systems, such as Oracle. Students learn to create and maintain blocks of PL/SQL code that are used and shared by multiple forms, reports and program libraries. Users learn to implement database triggers and other coded structures applicable to client/server databases.

45 Contact Hours. Prerequisite: CIS 145

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.

60 Contact Hours.

CIS 252 QUERYING A MICROSOFT SQL SERVER 2000 WITH TRANSACT-SQL (3)

Provides students with the technical skills required to write basic Transact-SQL queries for Microsoft SQL.

45 Contact Hours.

CIS 263 PC HELP DESK SKILLS (3)

Enables the student to understand and develop appropriate help-desk techniques. Includes roles of help desk personnel, and how to troubleshoot hardware and software problems.

45 Contact Hours.

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.

45 Contact Hours.

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.

45 Contact Hours.

See the list of Specialized Computer Information Systems Courses on the first page of this Course Offerings section.

CIS 280 INTERNSHIP (1-12)

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.

45 Contact Hours per credit. Prerequisite: To be determined by the instructor.

CNG - Computer Networking

CNG 121 COMPUTER TECHNICIAN I: A+ (4)

Introduces personal computer hardware to gain the skills and knowledge for a successful entry-level computer service technician. Provides extensive hands-on work with computer systems. Includes PC setup and configuration, floppy and hard drive installation and basic maintenance and troubleshooting. Successful completion prepares the student for the core hardware service technician portion of the CompTIA A+ Certification Exam.

60 Contact Hours.

CNG 122 COMPUTER TECHNICIAN II: A+ (4)

Focuses on operating systems as well as installation of modems, tape backups, CD-ROM drives, and SCSI subsystems. Covers operating systems, Windows 9x, Windows NT and Windows 2000 installation, configuration and upgrading. Includes laser printers and backup power systems. This course prepares the student for the CompTIA A+ OS Technologies Exam.

45 Contact Hours. Prerequisite: CNG 121

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.

45 Contact Hours. Prerequisite: CNG 122

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.

45 Contact Hours. Prerequisite: CNG 124

CNG 131 NETWORK SECURITY FUNDAMENTALS (3)

Delivers a comprehensive overview of network security, including general security concepts. Communication Security is studied, including remote access, email, 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. Maps fully to the CompTIA's Security+ Certification Exam.

45 Contact Hours. Prerequisite: Permission of instructor.

CNG 132 PRINCIPLES OF INFORMATION SECURITY (3)

Examines the field of information security to prepare information systems students for their future roles as business decision-makers. The course presents a balance of the managerial and the technical aspects of information security. The concepts covered in this course should be helpful for students working towards the Certified Information Systems Security Professional (CISSP) certification.

45 Contact Hours. Prerequisite: CNG 131

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.

68 Contact Hours. Prerequisite: CNG 125

CNG 212 MANAGING A MS WINDOWS SERVER ENVIRONMENT (4)

Provides students with the knowledge and skills that are required to manage accounts and resources, maintain server resources, monitor server performance and safeguard data in a Microsoft Windows Server environment.

90 Contact Hours. Prerequisite: CNG 211

CNG 213 IMPLEMENTING A MS WINDOWS NETWORK INFRASTRUCTURE (4)

Provides students with the knowledge and skills to implement and manage a Microsoft Windows Server network infrastructure. Students will learn to implement routing; implement and manage Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS) and Windows Internet Naming Service (WINS); secure Internet Protocol (IP) traffic with Internet Protocol security (IPSec) and certificates; configure a network access infrastructure and manage and monitor network access.

90 Contact Hours. Prerequisite: CNG 212

CNG 214 PLAN A MS WINDOWS SERVER NETWORK INFRASTRUCTURE (4)

Provides students with the knowledge and skills necessary to plan and maintain a Windows Server network infrastructure. Students will learn to plan optimize and troubleshoot a TCP/IP physical and logical network, routing, Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), Windows Internet Naming Service (WINS) and IPSec network access.

90 Contact Hours. Prerequisite: CNG 213

CNG 216 PLAN A MS WINDOWS SERVER ACTIVE DIRECTORY INFRASTRUCTURE (4)

Provides students with the knowledge and skills to successfully plan, implement, and troubleshoot a Microsoft Windows Server Active Directory service infrastructure. The course focuses on a Windows Server Directory service environment, including forest and domain structure, Domain Name System (DNS), site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user, group, and computer account strategies.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: CNG 213

CNG 226 IMPLEMENTING AND MANAGING MS EXCHANGE (3)

Provides the knowledge and skills necessary to install, configure, and administer Microsoft Exchange. Students learn to use Exchange in medium to very large computing environments that typically have multiple physical locations, mixed client connection protocols, and internet messaging connectivity.

45 Contact Hours. Prerequisite: CNG 213 or CNG 216

CNG 230 FAST TRACK CCNA 1 AND 2 (5)

Presents the first of two parts of the CCNA certification preparation course for students who 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.

75 Contact Hours. Prerequisites: CNG 122 and CNG 124

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.

75 Contact Hours. Prerequisite: CNG 230

COM - Communication

COM 100 WORKPLACE COMMUNICATION (1)

Covers topics that teach students how to communicate effectively in the workplace. Includes listening, speaking, reading, and writing and emphasizes the importance of these four modes of communication in the workplace.

15 Contact Hours.

‡ COM 115 PUBLIC SPEAKING (3)

Combines basic theory of speech communication with public speech performance skills. Emphasis is on speech delivery, preparation, organization, support, and audience analysis.

45 Contact Hours. ‡ 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.

45 Contact Hours. ‡ COM 115 or COM 125 is a CCCS requirement for A.A./A.S. Degrees.

COM 202 TEAMWORK AND COMMUNICATIONS FOR INDUSTRY (3)

Explores the advantages and disadvantages of using teams as a valid method to promote learning, critical thinking and problem solving skills in the manufacturing technician. Focuses on the roles of design team member, facilitator, and coach and examines how teams really work while valuing individual differences. Covers emotional intelligence, team dynamics, conflict resolution, and multi-rater assessment.

45 Contact Hours.

COM 217 GROUP COMMUNICATIONS (3)

Examines group communication theories with an emphasis on leadership and group behaviors. The course provides opportunities for group participation.

45 Contact Hours. Prerequisite: COM 115.

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.
45 Contact Hours.

COM 225 ORGANIZATIONAL COMMUNICATION (3)

Studies human communication systems and patterns in business and organizational settings. Topics include exploration of leadership strategies; effective managerial communication skills with peers, superiors, and subordinates; and organizational communication environments, networks and goals.
45 Contact Hours.

COM 226 ORAL INTERPRETATION (3)

Excites and exposes the student to the potential offered in the reading and performing of great literature such as is found in prose, poetry, and drama.
45 Contact Hours.

COM 230 ARGUMENTATION AND DEBATE (3)

Acquaints the student with the theory of argumentation, including reasoning, evidence, refutation, critical thinking, and extemporaneous speaking. It includes practice in preparation and oral analysis of selected arguments and styles of debating.
45 Contact Hours.

CON   - Construction Technology

CON 130 BLUEPRINT READING (2)

Focuses on the techniques for reading and using blueprints and specifications with an emphasis placed on those drawing and types of information that are relevant to the carpentry craft.
45 Contact Hours.

CRJ   - Criminal Justice

CRJ 110 INTRO TO CRIMINAL JUSTICE (3)

Introduces a study of the agencies and processes involved in the criminal justice system: the legislature, the police, the prosecutor, the public defender, the courts and corrections. Includes an analysis of the roles and problems of the criminal justice system in a democratic society, with an emphasis upon inter-component relations and checks and balances.
45 Contact Hours.

CRJ 111 SUBSTANTIVE CRIMINAL LAW (3)

Teaches legal definitions of crime, purposes and functions of the law, historical foundations, and the limits of the criminal law.
45 Contact Hours.

CRJ 112 PROCEDURAL CRIMINAL LAW (3)

Covers constitutional and procedural considerations affecting arrest, search and seizure, post-conviction treatment, origin, development, philosophy, and constitutional basis of evidence. Focuses on degrees of evidence and rules governing admissibility, judicial decisions interpreting individual rights,

and an analysis of case studies from arrest through final appeal.
45 Contact Hours.

CRJ 125 LAW ENFORCEMENT OPERATIONS (3)

Examines the complexity and multi-dimensional aspects of the law enforcement role and career; law enforcement discretion; law enforcement values and culture in modern America. Covers the role and functions of law enforcement in occupational, social, political and organizational context.
45 Contact Hours.

CRJ 126 PATROL PROCEDURES (3)

Focuses on an in-depth study of the basic knowledge and skills required of a peace officer to safely and effectively accomplish the patrol procedure.
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.
45 Contact Hours.

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.
45 Contact Hours.

CRJ 145 CORRECTIONAL PROCESS (3)

Focuses on the post-conviction corrections process, the development of a correctional philosophy, theory, and practice, a description of institutional operation, programming and management, and community-based corrections, probation, and parole.
45 Contact Hours.

CRJ 150 VICTIMS OF CRIME AND TRAUMA (3)

Introduces the student to 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.
45 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.
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.
45 Contact Hours.

CRJ 210 CONSTITUTIONAL LAW (3)

Focuses on the powers of government as they are allocated and defined by the United States Constitution. Includes intensive analysis of United States Supreme Court decisions.
45 Contact Hours.

CRJ 220 HUMAN RELATIONS AND SOCIAL CONFLICT (3)

Highlights the environmental, organizational and socio-psychological dimensions of social control. Includes the study of individual attitudes, beliefs and behavior involved in role conflicts, community relations and conflict management in the social structure.
45 Contact Hours.

CRJ 230 CRIMINOLOGY (3)

Examines the question of crime causation from legal, social, political, psychological and theoretical perspectives. Covers the history and development of criminology.
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.
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.
45 Contact Hours.

CRJ 250 COMPUTER CRIME INVESTIGATION (3)

Provides a basic foundation of the skills and knowledge necessary to understand and investigate the computer criminal. Investigative procedures, interviewing skills and the necessity of search warrants will be covered. Legal issues regarding personal liability, privacy and wiretapping will also be discussed.
45 Contact Hours.

CSC   - Computer Science

CSC 116 LOGIC AND PROGRAM DESIGN (3)

Introduces computer program design using concepts of structured programming and logic. Includes pseudocode, flowcharts and structure charts. Covers variables, data types, control structures, looping, program breaks and arrays.
45 Contact Hours. Prerequisite: MAT 099

CSC 154 INTRODUCTION TO MICROSOFT VISUAL BASIC .NET (OOP) (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.

45 Contact Hours. Prerequisite: CSC-116 or CSC-145 or equivalent

CSC 160 COMPUTER SCIENCE I: (C++) (4)

Introduces students to the discipline of computer science. Covers algorithm development, data representation, logical expressions, sub-programs and input/output operations using a structured programming language. Requires intensive lab work outside of class time.
60 Contact Hours. Prerequisite: CSC-116 or CSC-145 or equivalent

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.
60 Contact Hours. Prerequisite: CSC 160

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.
45 Contact Hours. Prerequisite: CSC 160 or equivalent

CSC 230 C PROGRAMMING (3)

Introduces C programming language - a mid-level language whose economy of expression and data manipulation features allow a programmer to deal with the computer at a low-level.
45 Contact Hours. Prerequisite: CSC 116

CSC 233 OBJECT-ORIENTED PROGRAMMING IN C++ (3)

Covers all syntactical components of the C++ language including arrays, structures, pointers, functions and classes. Emphasizes inheritance, overloading, and polymorphism. Focuses on writing clear, properly structured, and well-documented programs using the C++ language and Object-Oriented methodology. It is the advanced course in C++ programming.
45 Contact Hours. Prerequisite: CSC 160

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.
45 Contact Hours. Prerequisite: CSC 116

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.
45 Contact Hours. Prerequisite: CSC 240

CSC 251 PROGRAMMING WITH MICROSOFT VB.NET (3)

Provides students with the knowledge and skills needed to develop Microsoft .NET-based applications by using Visual Basic .NET. Focuses on Visual Basic .NET (a significant upgrade to Visual Basic) and incorporates new features and framework

goals of the .NET architecture. Enables the student to create enterprise applications for the .NET platform and to create more traditional Visual Basic applications that take advantage of the enhancements to the language.

45 Contact Hours. Prerequisite: CSC 154

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 of Completion from the Education Foundation.

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.

30 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.

45 Contact Hours.

CWB 130 WEB EDITING TOOLS: DREAMWEAVER (3)

Introduces advanced web editing techniques to control web page layout. Advanced HTML topics such as frames and web forms are introduced. In addition students learn to create and manage websites using a Graphical Web Design program such as Front Page or DreamWeaver.

45 Contact Hours.

CWB 164 XML (3)

Provides students with an introduction to the XML language's structure and syntax. Examines supporting tools such as XSL and CSS. This course is not designed to focus on a particular implementation of XML, but examines the possibilities of using XML with popular technologies such as Java SAX, SOAP, RDF and the DOM.

45 Contact Hours. Prerequisite: CWB 110

CWB 205 COMPLETE WEB SCRIPTING (3)

Explores the complete set of web scripting skills needed to develop web applications. Includes variables, data types, arithmetic operations, logical operations, looping, creating and reading cookies, creating an array, displaying data based on a cookie value, setting flags, working with frames, creating objects in a hidden frame, using the History Object, writing HTML to another window, determining browser and detecting keystrokes.

45 Contact Hours. Prerequisite: CWB 110

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.

45 Contact Hours.

CWB 245 COMPLETE WEB ANIMATION: fIASH (3)

Introduces students to web interactivity, design, and coding principles.

45 Contact Hours.

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.

45 Contact Hours. Prerequisites: CWB 254 or MGD 143.

DAN   - Dance

DAN 105 HIP HOP DANCE I (1)

Consists of basic traditional jazz and ballet movements. Warm-up exercises will include body toning and stretching. Students will learn diagonal step combinations leading to hip-hop dance.

30 Contact Hours.

DAN 106 HIP HOP DANCE II (1)

Includes traditional jazz, ballet and street dancing techniques as well as warm-up exercises such as body toning and stretching.   Students will learn diagonal and center step combinations leading to hip-hop dance routines.

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.

30 Contact Hours.

DAN 112 MODERN DANCE II (1)

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.

30 Contact Hours. Prerequisite: DAN 111 or permission of instructor.

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.

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.

30 Contact Hours. DAN 117 or permission of instructor.

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.

30 Contact Hours. Prerequisite: DAN 118 or permission of instructor.

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.

30 Contact Hours.

DAN 122 JAZZ II (1)

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.

30 Contact Hours. Prerequisite: DAN 121 or permission of instructor.

DAN 125 HISTORY OF DANCE I (3)

*(GT-AH1)

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.

45 Contact Hours. Note: 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.

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.

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.

30 Contact Hours.

DAN 132 BALLET II (1)

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.

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.

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.

68 Contact Hours. Corequisites: DEA 120 and DEA 121 or permission of instructor.

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.

45 Contact Hours. Corequisites: DEA 102, DEA 120, and DEA 121

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.

30 Contact Hours. Corequisites: DEA 102, DEA 120, DEA 121 or permission of instructor.

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.

15 Contact Hours.

DEA 121 DENTAL SCIENCE I (3)

Includes fundamentals of the oral structures as they apply oral histology, embryology, morphology, pathology, dental anatomy, and dental charting.

45 Contact Hours. Corequisite: 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.

45 Contact Hours. Corequisites: DEA 102, DEA 104, DEA 120, DEA 121, and DEA 126 or permission of instructor.

DEA 123 DENTAL MATERIALS I (3)

Includes fundamentals of dental materials as they apply to clinical and laboratory applications.

68 Contact Hours. Corequisites: 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.

68 Contact Hours. Prerequisites: DEA 120, DEA 121, and DEA 123

DEA 125 DENTAL RADIOGRAPHY (3)

Focuses on the science of radiography and the application of radiographic techniques, and aseptic techniques.

68 Contact Hours. Corequisites: 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.

45 Contact Hours. Corequisites: 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 and aseptic techniques. Enables the student to expose radiographs on the x-ray mannequin and patients. Students must be a minimum of 18 years of age.

68 Contact Hours. Prerequisites: DEA 120, DEA 121, and DEA 125

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.

45 Contact Hours.

DEA 134 PREVENTION AND NUTRITION IN DENTISTRY (2)

Includes techniques in preventive dentistry with an emphasis on fluoride application and oral home care instruction. Includes nutrition as it applies to dental health and diet counseling. Covers techniques for coronal polishing.

45 Contact Hours. Prerequisites: DEA 102, DEA 120, DEA 121 and DEA 126

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.

45 Contact Hours. Corequisites: DEA 102, DEA 111, DEA 120, DEA 123, DEA 125 and DEA 126.

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.

45 Contact Hours per credit. Prerequisites: DEA 102, DEA 104, DEA 111, DEA 120, DEA 121, DEA 122, DEA 123, DEA 124, DEA 125, DEA 126, DEA 131, DEA 134, and DEA 183.

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.

90 Contact Hours. Prerequisite: DEA 181 or permission of instructor.

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.

90 Contact Hours. Prerequisite: Graduate of an ADA accredited program, Certified Dental Assistant, or 2 years of documented experience.

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.

23 Contact Hours. Prerequisites: CPR professional rescuer certification and one-year work experience

See the list of Specialized Dental Assisting Courses on the first page of this Course Offerings section.

DIT – Dietetic Technology

DIT 110 THE MODIFIED DIET (3)

Emphasizes the diet as a therapeutic tool in the treatment of certain diseases and conditions. Covers menu planning, calculation of exchanges, computerized nutritional analysis and development of recipes for tasteful, appealing foods for modified diets.

45 Contact Hours. Prerequisite: HWE 100.

DIT 116 INTRODUCTION TO DIETETICS (1)

Investigates the career choice of nutrition and dietetics including the rules and role responsibilities of the dietetic technician, the history, legal implications, ethical responsibilities and the role of the professional organization.

15 Contact Hours.

DIT 121 NUTRITION FOR DIETARY MANAGERS (4)

Focuses on normal nutrition in the individual, nutrition education, nutritional assessment and care plans, principles of therapeutic nutrition, diet modifications, and quality assurance for clinical nutrition services. Note: This course is designed for students enrolled in the Dietary Manager certificate program.

60 Contact Hours. Corequisite: DIT 170.

DIT 123 MANAGEMENT FOR DIETARY MANAGERS (4)

Covers the following topics: menu planning, food and supplies procurement and production, personnel supervision, human relations, staff development, financial control, operations management, sanitation and safety. Note: This course is designed for students enrolled in the Dietary Manager certificate program.

60 Contact Hours. Corequisite: DIT 171.

DIT 170 FIELD EXPERIENCE: NUTRITION FOR DMA (2)

Incorporates field experience for students concurrently enrolled in DIT 121. Provides experience in a pre-approved nursing home or hospital setting. Emphasizes normal and therapeutic nutrition with experiences in the following areas: normal nutrition in the individual, nutrition education, nutritional assessment and care plans, principles of therapeutic nutrition, diet modifications, and quality assurance for clinical nutrition services. Students must meet health immunizations and carry malpractice insurance to be enrolled.

75 Contact Hours (Clinical). Corequisite: DIT 121.

DIT 171 FIELD EXPERIENCE: MANAGEMENT FOR DMA (2)

Provides field experience for students concurrently enrolled in DIT 123 and is performed in a pre-approved nursing home or hospital setting. Covers menu planning, food and supplies procurement and production, personnel supervision, human relations and staff development, financial control, operations management, sanitation and safety control. Students must meet health immunizations and carry malpractice insurance to be enrolled.

75 Contact Hours (Clinical). Corequisite: DIT 123.

DIT 205 APPLIED ENTERAL AND PARENTERAL NUTRITION THERAPY (1)

Provides instruction for dietetic technician students, dietitians and health professionals interested in medical nutrition therapy through the use of enteral and parenteral nutrition. Offers 12 CEUs from the American Dietetic Association and the Dietary Managers Association.

15 Contact Hours. Prerequisites: DIT 110 AND HWE 100

DIT 212 NUTRITION CARE SEMINAR (3)

Incorporates hospital clinical experience. Enables the student to make correlation between the case study and application of nutritional interventions in real life patients at the work site. Focuses on special instruction on nutritional assessment to prepare for performing similar tasks in a clinical setting. Increases awareness of textbook versus actual disease states.

45 Contact Hours. Prerequisites: DIT 110, DIT 116 and HWE 100.

DIT 221 FOOD AND DRUG INTERACTIONS (3)

Focuses on prescription and over-the-counter drugs in common use and assesses the side effects. Addresses the nutritional ways of overcoming these side effects.

45 Contact Hours. Prerequisite: HWE 100

DIT 250 FOOD MANAGEMENT SEMINAR (3)

Provides an integrated systems treatment of aspects of medical food service.

45 Contact Hours. Prerequisite: Permission of instructor.

See the list of Specialized Dietetic Technology Courses on the first page of this Course Offerings section.

DIT 270 CLINICAL EXPERIENCE: COMMUNITY AND NON-TRADITIONAL (4)

Designed to give first hand experience with community nutrition and the changing health care delivery systems. It will provide an overview of the agencies and programs involved in community nutrition. It will also address the significant nutrition problems facing society. The student will have an in-depth experience in one community nutrition agency. This course is part of the American Dietetic Association accredited program for the Dietetic Technician.

160 Contact Hours (150 clinical hours, 10 seminar hours). Prerequisite: HWE 100 or permission of Program Director.

DIT 271 CLINICAL EXPERIENCE: NUTRITION CARE (4)

Incorporates first hand experience with health care clients in a hospital setting. Emphasizes therapeutic dietetics and the application of nutritional care to clinical cases. Provides experience in hospital policy and procedures, nutrition education in a hospital and hospital food service management. Enables the student to have the opportunity to chart and follow an individual patient in a case study. This course is part of the American Dietetic Association accredited program for the Dietetic Technician.

160 Contact Hours (150 clinical hours, 10 seminar hours). Prerequisite: HWE 100 or permission of Program Director.

DIT 272 CLINICAL EXPERIENCE: ADMINISTRATIVE DIETETICS (4)

Incorporates first hand experience with health care clients in retirement/nursing home centers. Emphasizes the administrative side of dietetics with experiences in menu planning, food preparation, purchasing, personnel management, financial control, sanitation and safety. Includes experiences in patient care, education and charting. This course is part of the American Dietetic Association accredited program for the Dietetic Technician.

160 Contact Hours (150 clinical hours, 10 seminar hours). Prerequisites: DIT 110 and HWE 100 or permission of Program Director.

ECE - Early Childhood Education

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.

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.

75 Contact Hours (15 lecture hours, 60 lab hours). Prerequisite: ECE 101. Corequisite: ECE 101.

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.

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.

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.

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.

75 Contact Hours (15 lecture hours, 60 lab hours). Prerequisite: ECE 111. Corequisite: ECE 111.

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.

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.

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.

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.

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.

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.

15 Contact Hours.

ECE 162 TRANSITIONS FOR HANDICAPPED ADOLESCENTS (1)

Introduces an overview of transition issues that affect adolescents with handicaps from middle school through independent living. Emphasizes ways in which paraprofessionals provide support and encouragement for students throughout these transitions.

15 Contact Hours.

ECE 163 FACILITATING FUNCTIONAL SKILLS FOR COMMUNICATION (2)

Focuses on recognizing and identifying normal patterns of speech development. Enables students to develop skills in facilitating growth and development by creatively implementing various techniques and/or use of equipment in order to enhance the optimum growth and development of the child.

30 Contact Hours.

ECE 179 SEMINAR (1-2)

Provides students with an opportunity to examine aspects of early childhood education in detail.

15 Contact Hours per credit. Corequisite: ECE 180.

ECE 180 INTERNSHIP (1-6)

Focuses on work experience in an early childhood setting.

Corequisite: ECE 179. Contact Hours vary.

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.

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.

45 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.

45 Contact Hours. Prerequisite: ECE 101 or ECE 238.

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.

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.

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.

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.

30 Contact Hours.

ECE 238 CHILD GROWTH AND DEVELOPMENT (4)

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. This course has an early childhood laboratory component.

75 Contact Hours. (45 lecture hours, 30 observation 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.

45 Contact Hours. Prerequisite: ECE 220 or ECE 238.

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.

45 Contact Hours.

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.

45 Contact Hours. Prerequisite: ECE 238.

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.

45 Contact Hours.

See the list of Specialized Early Childhood Education Courses on the first page of this Course Offerings section.

ECE 279 SEMINAR (1-2)

Provides students with an opportunity to examine aspects of early childhood education in detail.

15 Contact Hours per credit. Prerequisites: ECE 102 and ECE 179. Corequisite: ECE 280 or ECE 287. 15-30 Contact Hours.

ECE 280 INTERNSHIP (3)

Focuses on work experience in a licensed early childhood care and education program.

135 Contact Hours. Prerequisites: ECE 102, ECE 179 and ECE 180. Corequisite: ECE 279.

ECE 287 COOPERATIVE EDUCATION (2)

Focuses on a college-to-work based experience that draws on combined efforts of educators and employers to produce outcomes related to student career objectives.

45 Contact Hours Per Credit. Corequisite: ECE 279.

ECO - Economics

ECO 101 ECONOMICS OF SOCIAL ISSUES (3)
*(GT-SS1)

Examines the major socio-economic issues of the past century. Covers poverty and growth, education, health care, pollution and discrimination.

45 Contact Hours.

ECO 201 PRINCIPLES OF MACROECONOMICS (3)
*(GT-SS1)

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.

45 Contact Hours.

ECO 202 PRINCIPLES OF MICROECONOMICS (3)
*(GT-SS1)

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.

45 Contact Hours.

ECO 245 ENVIRONMENTAL ECONOMICS (3)

*(GT-SS1)

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.

45 Contact Hours.

EDU - Education

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.

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.

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.

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.

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.

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.

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.

45 Contact Hours.

EDU 134 TEACHING ENGLISH AS A SECOND LANGUAGE TO ADULT LEARNERS (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.

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.

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.

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.

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.

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.

45 Contact Hours. Prerequisite: College level English proficiency or ENG 090 or SPE 115 or COM 115. Corequisite: May include additional field experience if not embedded in the course.

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.

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.

60 Contact Hours. Prerequisite: EDU 221

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.

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.

45 Contact Hours. Prerequisite: EDU 221

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.

45 Contact Hours. Prerequisite: EDU 221 or permission of instructor.

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.

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.

45 Contact Hours. Prerequisite: EDU 221 or EDU 260

ELT - Electronics

ELT 106 Fundamentals of DC/AC (3)

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.

68 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.

68 Contact Hours.

ELT 147 Digital Devices I (3)

Introduces the operation and application of gates, flip-flops, counters, shift registers, encoders-decoders and LED displays. Covers binary numbers, Boolean algebra and troubleshooting.

68 Contact Hours.

ELT 149 Digital Devices Troubleshooting (2)

Focuses on troubleshooting to the component level after a detailed circuit analysis of a digital system that is not microprocessor bases is performed.

45 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.

68 Contact Hours.

ELT 206 ELECTRONIC TROUBLESHOOTING II (3)

Focuses on selection, maintenance and care procedures for equipment used in troubleshooting analog equipment. Introduces basic repair procedures and quality assurance and control methods.

68 Contact Hours.

ELT 252 MOTORS AND CONTROLS (3)

Enables the student to study, construct, test and evaluate basic industrial control systems, including AC/DC motors, stepper motors, power sources, generators, tachometers, line diagrams and logic functions. Covers safety standards and preventive maintenance.

68 Contact Hours.

ELT 254 Industrial Wiring (3)

Focuses on the required and recommended practice for industrial wiring.   The national Electrical Code is applied to industrial power and control wiring.   Covers specification and installation of wiring, conduit, enclosures, and termination components in lecture and applied during lab.

68 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.

68 Contact Hours.

ELT 259 ADVANCED PROGRAMMABLE LOGIC CONTROLLERS (3)

Serves as the second in a two course sequence and covers advanced applications for programmable logic controllers (PLCs) as they are applied in robotics and automation. Includes advanced programming, diagnostics, Human Machine Interfaces (HMIs), introduction to automation networking, and system integration.   Incorporates lab and project activities that address designing, operating, monitoring, programming, analyzing troubleshooting, and repairing PLC controlled lab trainers as well as actual industrial equipment..

68 Contact Hours.

EMS   -   Emergency Medical Services

EMS 115 FIRST 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.

53 Contact Hours (30 lecture hours, 23 lab hours).

EMS 125 EMT BASIC (9)

Enables the student after successful completion of this course to take the EMT Certification Examination subject to the requirements of the Colorado Department of Health and Environment. Includes written and practical examinations. Student must be at least 18 years of age.

158 Contact Hours. Corequisite: EMS 170.

EMS 126 EMT BASIC REFRESHER (2)

Provides the student with a refresher course designed to meet the recertification requirements for the state of Colorado and/or a portion of the recertification requirements for National Registry.

36 Contact Hours. Prerequisites: Current EMT-Basic certification or National Registry less than 2 years expired or Colorado EMT-Basic Certification less than 6 months expired.

EMS 130 EMT INTRAVENOUS THERAPY (2)

Provides cognitive and skill practice as required by Colorado Prehospital care program for EMT Basic level IV approval. Examines the criteria, procedures and techniques for IV therapy, discusses fluid and electrolyte balance and principles and treatment for shock.

38 Contact Hours (15 lecture hours, 23 lab hours). Prerequisite: State of Colorado EMT Basic Certification required (Note: National Registry alone does not fulfill the prerequisite).

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.

22.5 Contact Hours

EMS 170 EMT BASIC CLINICAL (1)

Provides the EMT student with the clinical experience required of initial and some renewal processes. Grading in this course is based upon the assignment on a grade of either satisfactory or unsatisfactory.

30 Contact Hours. Corequisite: EMS 125 or EMS 126.

EMS 180 EMT CLINICAL INTERNSHIP (2)

Provides the student 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-Basic.

90 Contact Hours. Prerequisites: Current EMT certification and permission of instructor.

EMS 190 EMT PROFESSIONAL DEVELOPMENT (0-12)

Provides professional development continuing medical education hours for EMT-Basics wishing to recertify at the state or national level.

Note: See current semester schedules for credit offered. Provides additional EMT topic content that applies to National Registry renewal.

EMS 203 EMT INTERMExDIATE I (6)

Provides preparatory information and is the first part of the EMT Intermediate program.

113 Contact Hours (45 lecture hours, 68 lab hours). Prerequisite: EMT-B certification and permission of program director.

EMS 205 EMT INTERMExDIATE II (6)

Serves as the second course for EMT Intermediate certification.

113 Contact Hours (45 lecture hours, 68 lab hours). Prerequisite: EMS 203.

EMS 214 BASIC TRAUMA LIFE SUPPORT (1)

Provides students with information and skill practice to treat trauma patients in the pre-hospital environment.

23 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.

53 Contact Hours (30 lecture hours, 23 lab hours). Prerequisite: Currently certified as an EMT-P or National Registry less than 2 years expired or Colorado EMT-Paramedic less than 6 months expired.

EMS 225 FUNDAMENTALS OF PARAMEDIC PRACTICE (3)

Serves as the first course of the National Standard Paramedic Curriculum as approved by the Colorado State Department of Health and Environment.

68 Contact Hours. Prerequisites: Current certification as an EMT - Basic and acceptance into the EMT-Paramedic training program.

EMS 226 FUNDAMENTALS OF PARAMEDIC PRACTICE LAB (2)

Serves as the lab experience to coincide with EMS 225 topics.

45 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 227 PARAMEDIC SPECIAL CONSIDERATIONS (3)

Focuses on a comprehensive study of Advanced Life Support Practice.

68 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 228 PARAMEDIC SPECIAL CONSIDERATIONS LAB (2)

Serves as the lab experience for those students enrolled in EMS 227.

45 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 229 PARAMEDIC PHARMACOLOGY (3)

Focuses on a comprehensive study of emergency pharmacology.

45 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 230 PARAMEDIC PHARMACOLOGY LAB (2)

Serves as the required lab course in the paramedic education program.

45 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 231 PARAMEDIC CARDIOLOGY (5)

Addresses cardiology topics as presented in the National Standard Curriculum for paramedics.

75 Contact Hours. Prerequisites: Current certification as an EMT - Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 232 PARAMEDIC CARDIOLOGY LAB (1)

Incorporates a hands-on application of principles of cardiac care in the hospital environment.

23 Contact Hours. Prerequisites: Current certification as an EMT - Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 233 PARAMEDIC MEDICAL EMERGENCIES (4)

Focuses on a comprehensive study of adult medical emergencies.

60 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 234 PARAMEDIC MEDICAL EMERGENCIES LAB (1)

Focuses on a clinical study of adult and pediatric medical emergencies.

23 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 235 PARAMEDIC TRAUMA EMERGENCIES (4)

Focuses on a comprehensive study of adult and pediatric trauma emergencies.

60 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 236 PARAMEDIC TRAUMA EMERGENCIES LAB (1)

Serves as a lab presenting various acute trauma scenarios.

23 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

See the list of Specialized Emergency Medical Services Courses on the first page of this Course Offerings section.

EMS 270 CLINICAL: EMT INTERMExDIATE (3)

Provides the EMT-1 student with the required field experience as required by the Colorado Department of Health.

135 Contact Hours. Prerequisites: EMS 203.

EMS 280 PARAMEDIC INTERNSHIP I (6)

Serves as the preceptor/internship program for paramedic students.

270 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

EMS 281 PARAMEDIC INTERNSHIP II (6)

Serves as the continuation of EMS 280, preceptor program for paramedic students.

270 Contact Hours. Prerequisites: Current certification as an EMT-Basic or intermediate and acceptance into the EMT-Paramedic training program.

ENG   - English

ENG 030 BASIC WRITING SKILLS (2)

Focuses on sentence and basic paragraph structure and development. Enables the student to review and improve grammar, usage, and punctuation skills while employing critical thinking strategies and the writing process to respond to a wide variety of writing situations.

30 Contact Hours. Prerequisite: Appropriate writing diagnostic scores required. Note: ESL 051 covers equivalent content.

ENG 060 WRITING FUNDAMENTALS (3)

Focuses on paragraph structure and development and introduces the formal essay. Enables the student to review and improve grammar, usage, and punctuation skills while employing critical thinking strategies and the writing process to respond to a wide variety of writing situations.

45 Contact Hours. Prerequisite: Appropriate writing diagnostic scores required or grade of "C" or better in ENG 030, or grade of C or better in ESL 051.

ENG 090 BASIC COMPOSITION (3)

Emphasizes critical thinking as students explore writing for specific purposes and audiences. Enables the student to develop skills required for college-level writing while reviewing paragraph structure and focusing on essay development. For students with an Accuplacer score of 70-94.

45 Contact Hours. Prerequisite: Appropriate writing diagnostic scores required or grade of "C" or better in ENG 060.

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.

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.

45 Contact Hours.

ENG 121 ENGLISH COMPOSITION I (3)

*(GT-CO1)

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.

45 Contact Hours. Prerequisite: Appropriate writing diagnostic scores required or grade of "C" or better in English 090.

ENG 122 ENGLISH COMPOSITION II (3)

*(GT-CO2)

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.

45 Contact Hours. Prerequisite: ENG 121 with a grade of "C" or better.

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.

45 Contact Hours. Prerequisite: College level writing skills.

ENG 132 TECHNICAL WRITING II (3)

Expands and refines the objectives of ENG 131, emphasizing formal presentations, both written and oral.

45 Contact Hours. Prerequisite: ENG 131 with a grade of "C" or better or permission of instructor.

ENG 201 WRITING FOR PUBLIC DISCOURSE (3)

*(GT-CO3)

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, 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 .

45 Contact Hours. Prerequisites: ENG 121, 122.

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.

Note: This course is co-scheduled with THE 215 and may be taken as ENG 215 or THE 215 but not both.

45 Contact Hours.

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.

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.

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.

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.

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.

45 Contact Hours.

ENT - Engineering Technology

ENT 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.

15 Contact Hours.

ENT 106 PRINT READING FOR MANUFACTURING (3)

Focuses on blueprint reading techniques related to manufacturing operations. Covers basic drafting standards, sketching, machine shop math, symbol interpretation, tolerancing, and dimensioning standards.

45 Contact Hours.

ENT 110 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.

45 Contact Hours.

ENT 120 STATISTICAL PROCESS CONTROL (2)

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.

45 Contact Hours.

ENT 125 PRINCIPLES OF QUALITY ASSURANCE (3)

Introduces the scope and function of quality assurance, including basic definitions, statistics, quality policy and objectives, manuals and procedures, concept of variation, inspection and sampling techniques, metrology process control, methods and the elements of reliability. Current (TQM) and ISO 9000 standards are reviewed.

67.5 Contact Hours.

ENT 131 MECHANICAL DRAWING I (4)

Enables students to manually manipulate drafting tools, computer keyboard, and mouse. Includes basic drafting techniques, use and care of instruments, lettering, line quality, geometric construction, orthographic projection, sectioning, sketching, auxiliary views, and a basic introduction to dimensioning techniques. Provides an introduction to CAD.

90 Contact Hours.

ENT 134 GEOMETRIC DIMENSIONING AND TOLERANCING   (2)

Enables the student to study and apply principles involving tolerance fits between mating parts and techniques involving precision.

45 Contact Hours. Prerequisites: CAD 100 & ENT 131.

ENT 143 SURVEY DRAFTING   (3)

Enables the student to practice the methods involved in converting surveying information into graphic drawings using inking techniques.

67.5 Contact Hours.

ENT 155 MANUFACTURING TECHNOLOGY I (4)

Focuses on contemporary manufacturing organization, methods, and processes involved in converting raw materials into finished products.

45 Contact Hours.

ENT 175 SPECIAL TOPICS: 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.

45 Contact Hours.

ENT 233 MACHINE DESIGN I (3)

Focuses on the industrial design process from layout to production drawings, jig and fixture design standard part selection from handbooks and catalogs, specification writing, and part ordering.

67.5 Contact Hours. Prerequisite: None

ENT 234 MACHINE DESIGN II (3)

Emphasizes the layout and design of mechanical systems, tool selection, standard parts selection, report and specification writing, and part ordering techniques.

67.5 Contact Hours. Prerequisite: None

ENT 237 STATICS (3)

Focuses on the study of mechanics involving forces and the effects of forces on bodies in equilibrium.   Includes force systems, coplanar force systems, structure analysis, friction spatial force systems gravity and centroids.

67.5 Contact Hours.   Prerequisites: TEC 201 & MAT 107.

ENT 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.

45 Contact Hours.

ENT 247 STRENGTH OF MATERIALS (3)

Serves as an extension of Statics and includes the study of mechanical properties of materials and their limitations in engineering design by the study or stresses, strains, torsion forces, shear forces, and deflections placed upon these materials.

67.5 Contact Hours. Prerequisites: TEC 201

See the list of Specialized Engineering Technology Courses on the first page of this Course Offerings section.

ENT 289 CAPSTONE (1-12)

A demonstrated culmination of learning within a given program of study.

15-180 Contact Hours.

ENV - Environmental Sciences

ENV 101 INTRODUCTION TO ENVIRONMENTAL SCIENCE (4)

*(GT-SC1)

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.

90 Contact Hours.

ESL - English as a Second Language

ESL 022 INTERMExDIATE GRAMMAR (3)

Reviews basic grammar and introduces intermediate structures. Provides integrated practice through a variety of oral and written exercises.

45 Contact Hours. Prerequisite: Appropriate placement scores.

ESL 023 ADVANCED GRAMMAR (3)

Reviews intermediate grammar. Introduces advanced structures with increased emphasis on written communication.

45 Contact Hours. Prerequisite: ESL 022 or appropriate placement scores.

ESL 032 INTERMExDIATE CONVERSATION (3)

Teaches listening, pronunciation, and conversation skills. Increases speed and accuracy in speaking through free and guided conversational practice.

45 Contact Hours. Prerequisite: Appropriate placement scores.

ESL 033 ADVANCED CONVERSATION (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.

45 Contact Hours. Prerequisite: ESL 032 or appropriate placement scores.

ESL 041 BASIC READING (3)

Improves comprehension of simple written texts through vocabulary building and reading strategies.

45 Contact Hours.

ESL 042 INTERMExDIATE READING (3-4)

Helps the student read more quickly and accurately and understand a variety of intermediate level reading material.

45-60 Contact Hours. Prerequisite: Appropriate placement scores.

ESL 043 ADVANCED READING (3-4)

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.

45-60 Contact Hours. Prerequisite: ESL 042 or appropriate placement scores.

ESL 052 INTERMExDIATE COMPOSITION (3)

Introduces the fundamentals of paragraph organization and development. Assists the student in developing sentence variety and grammatical competency within well-organized paragraphs.

45 Contact Hours. Prerequisite: 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.

45 Contact Hours. Prerequisite: ESL 052 or appropriate placement scores.

ESL 055 COMPUTER BASICS FOR ESL STUDENTS (2)

Introduces the basic skills for computer use, including word processing, text entry, and document appearance, editing, spelling, and printing.

30 Contact Hours. Prerequisite: Appropriate placement scores or permission of instructor.

ESL 061 VOCATIONAL ESL I (3)

Teaches limited English vocational students basic communication skills in preparation for vocational training and work.

45 Contact Hours. Prerequisite: Appropriate placement scores.

ESL 062 VOCATIONAL ESL II (3)

Provides intermediate to advanced level English language learners with instruction in language skills for vocational training and employment.

45 Contact Hours. Prerequisite: ESL 061 or appropriate placement scores.

ESL 073 ESL ACADEMIC STUDY STRATEGIES (3)

Introduces academic study strategies to students whose first language is not English and who need preparation to enter the mainstream of academic study. Enables the student to develop skills in listening, reading, speaking, and critical thinking.

45 Contact Hours. Prerequisite: Appropriate placement scores or permission of instructor.

ETH - Ethnic Studies

ETH 200 INTRODUCTION TO ETHNIC STUDIES (3)

*(GT-SS3)

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.

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.

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.

45 Contact Hours.

FIN - Finance

FIN 106 CONSUMER ECONOMICS (3)

Focuses on consumer effectiveness based on consumer choice theory, maximizing income through informed decision making, product utility, and customer satisfaction.

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.

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.
53 Contact Hours.

FLD 200 ADVANCED FLORAL DESIGN (3)

Focuses on advanced floral design concepts and techniques including special event, wedding and sympathy arrangements.
53 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.
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.
45 Contact Hours. Prerequisite: FRE 101.

FRE 111 FRENCH LANGUAGE I (5)

Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading, and writing the French language.
75 Contact Hours.

FRE 112 FRENCH LANGUAGE II (5)

Continues French I in the development of functional proficiency in listening, speaking, reading and writing the French language.
75 Contact Hours. Prerequisite: FRE 111.

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.
45 Contact Hours. Prerequisite: FRE 102.

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.
45 Contact Hours. Prerequisite: FRE 201.

FRE 211 FRENCH LANGUAGE III (3)
*(GT-AH4)

Continues French I and II in the development of increased functional proficiency in listening, speaking, reading and writing the French language.
45 Contact Hours. Prerequisite: FRE 112.

FRE 212 FRENCH LANGUAGE IV (3)
*(GT-AH4)

Continues French I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the French language.
45 Contact Hours. Prerequisite: FRE 211.

FST - Fire Science Technology

FST 100 FIREFIGHTER I (9)

Addresses the requirements necessary to perform at the first level of progression as identified in National Fire Protection Association (NFPA) 1001, Firefighter Professional Qualifications. This is a lecture and lab course for meeting the NFPA 1001, level I, standard using IFSTA Essentials.
158 Contact Hours (90 lecture hours and 68 lab hours).

FST 150 INTRODUCTION TO FIRE PREVENTION EDUCATION (3)

Focuses on conducting prevention and education needs assessment, targeting audiences; development and delivery of prevention and education programs. Includes methods of conducting fire prevention and safety inspections.
45 Contact Hours.

FST 152 WILDLAND FIREFIGHTING (3)

Introduces a basic understanding of wildland fire and the strategies and tactics involved during suppression operations. Includes fire line safety, emphasizing the wildland fire orders and watch out situations. Students receive training qualifying them as Certified Wildland Firefighter under the Incident Command System, recognized by the National Wildfire Coordinating Group. Covers fire behavior, fire weather, fuel types, safety equipment and guidelines, incident size up, determining resource needs, aircraft identification and capabilities, direct vs. indirect attack, burn-out, backfiring and map reading.
45 Contact Hours.

FST 260 INTERMExDIATE FIRE BEHAVIOR S-290 (2)

Analyzes the affects of fuels, weather, topography and fire behavior on the wildland fire environment. Acquaints prospective fire line supervisors in wildland fire behavior for effective and safe fire management operations.
30 Contact Hours.

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 can be taught in conjunction with or prior to Firefighting Training S-130.
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 should be issued for S-130.
30 Contact Hours.

GED - General Education Development

GED 010 PRE-GED PREPARATION (1-3)

For students who need review before doing GED preparation. Diagnostic tests determine skill level; help is available in writing skills, reading, and mathematics.
15-45 Contact Hours.

GED 011 GED PREPARATION (1-3)

For students who need to prepare for the GED tests: Language Arts, Writing; Language Arts, Reading; Mathematics; Science; and Social Studies.
15-45 Contact Hours.

GEO - Geography

GEO 105 WORLD REGIONAL GEOGRAPHY (3)

*(GT-SS2)

Facilitates an understanding of spatial relationships between and among the geographic regions of the world. Includes demographic and cultural (political, economic, and historic) forces related to the physical environments of selected regions. Focuses on analysis of interrelationships between developed and developing regions, and the interactions between human societies and natural environments.
45 Contact Hours.

GEO 106 HUMAN GEOGRAPHY (3)

*(GT-SS2)

Introduces geographic perspectives and methods with applications to the study of human activities. Emphasizes the distribution of humans, adjustments to the natural environment, and land use practices.
45 Contact Hours.

GEO 111 PHYSICAL GEOGRAPHY-LANDFORMS (4)

*(GT-SC1)

Introduces the principles of landforms as a major aspect of our natural environment. Incorporates an integrated process of lecture, discussion, and laboratory assignments.
75 Contact Hours.

GEO 112 PHYSICAL GEOGRAPHY-WEATHER AND CLIMATE (4)

*(GT-SC1)

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.
75 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.
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.
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.
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.
45 Contact Hours. Prerequisite: GER 101.

GER 111 GERMAN LANGUAGE I (5)

Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading, and writing the German language.
75 Contact Hours.

GER 112 GERMAN LANGUAGE II (5)

Continues German Language I in the development of functional proficiency in listening, speaking, reading and writing the German language.
75 Contact Hours. Prerequisite: GER 111.

GER 201 CONVERSATIONAL GERMAN III (3)

Continues the sequence for students who wish to advance their study of understanding and speaking German. Focuses on intermediate level vocabulary, grammar, and expressions.
45 Contact Hours. Prerequisite: GER 102.

GER 202 CONVERSATIONAL GERMAN IV (3)

Continues the sequence for students who wish to advance their study of understanding and speaking German. Focuses on intermediate level conversational patterns, expressions, and grammar.
45 Contact Hours. Prerequisite: GER 201.

GER 211 GERMAN LANGUAGE III (3)

*(GT-AH4)

Continues German Language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the German language.
45 Contact Hours. Prerequisite: GER 112.

GER 212 GERMAN LANGUAGE IV (3)

*(GT-AH4)

Continues German Language I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the German language.

45 Contact Hours. Prerequisite: GER 211.

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.

45 Contact Hours. Prerequisite: GER 212.

GEY - Geology

GEY 111 PHYSICAL GEOLOGY (4)

*(GT-SC1)

Studies the materials of the earth, its structure, surface features and the geologic processes involved in its development. This course includes laboratory experience.

90 Contact Hours (45 lecture hours, 45 lab hours).

GEY 121 HISTORICAL GEOLOGY (4)

*(GT-SC1)

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.

90 Contact Hours (45 lecture hours, 45 lab hours). Prerequisite: GEY 111.

GEY 135 ENVIRONMENTAL GEOLOGY (3)

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.

45 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.

45 Contact Hours. Prerequisite: 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.

114 Contact Hours. Prerequisite: Permission of instructor.

See the list of Specialized Geology Courses on the first page of this Course Offerings section.

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.

15 Contact Hours per credit.

GIS - Geographic Information Systems

GIS 101 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (3)

Surveys the development and operation of automated geographic information systems. Focuses on the fundamentals of using computers to draw maps. Incorporates study of cartographic fundamentals such as map projections, map scales, selective display of data on maps, and various computer software applications in GIS.

45 Contact Hours. Prerequisites: GIS 110 or permission of instructor.

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. Emphasis on cartographic protocol results in the effective communication of both qualitative and quantitative information.

45 Contact Hours.

GIS 150 RELATIONAL DATABASE MANAGEMENT SYSTEMS (3)

Emphasizes various types of data, data management, and the complex relationships between data files and a GIS. Enables the student to learn several essential components and methods of successful data and project management.

45 Contact Hours. Prerequisites: GIS 101 and GIS 110.

GIS 165 GIS PROJECT MANAGEMENT (3)

Examines a variety of organizational and planning methods used in the GIS industry. Includes application of scientific methods, problem solving, logics and time management.

45 Contact Hours. Prerequisites: GIS 101 and GIS 110.

GIS 205 GIS BUSINESS APPLICATIONS (3)

Presents a sequel to GIS 105 with a deeper look at the principles of GIS, including both raster and vector data structures, data conversion, map algebra, spatial analysis, modeling, and networks. Various ways that GIS is currently being used in science, business, and government will also be presented. ArcView Network Analyst, Spatial Analyst, and 3D Analyst software will be utilized and a final project is required.

45 Contact Hours. Prerequisite: None

GIS 210 INTERMExDIATE GEOGRAPHIC INFORMATION SYSTEMS (3)

Builds upon the spatial analysis principles and concepts of GIS 101. Students work with more advanced analytical tools and develop skills in spatial problem solving.

45 Contact Hours. Prerequisites: GIS 101 and GIS 110 or permission of instructor.

GIS 211 SPATIAL DATA MODELING AND ANALYSIS (4)

Introduces the student to a variety of techniques for modeling and analyzing spatial data in a GIS. Includes network analysis, TINs, raster grids, pattern analysis, and time series mapping.
60 Contact Hours. Prerequisite: GIS 210.

GIS 212 REMOTE SENSING AND DIGITAL IMAGE PROCESSING (4)

Introduces students to basic concepts and procedures used in the processing of remotely sensed data, with an emphasis on integration of digital imagery into basic GIS applications.
60 Contact Hours. Prerequisite: GIS 101. Corequisite: GIS 101.

GIS 221 COMMUNITY ASSESSMENT AND ANALYSIS (3)

Provides an in-depth examination of problems currently facing a variety of public and private institutions in our region, and explores a variety of ways these problems are solved using GIS. Students learn advanced mapping techniques and analysis methods in projects they select.
45 Contact Hours.

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.
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.
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.
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.
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.
15 Contact Hours.

HHP 142 INTRO TO TRADITIONAL CHINESE MEDICINE (1)

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.
15 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.
15 Contact Hours.

HHP 145 DIGESTIVE WELLNESS (1)

Provides the student with information on nutritional and herbal self-care treatments.
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.
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.
15 Contact Hours. Prerequisite: HHP 144 and HHP 150.

HHP 160 LEARN TO MEDITATE (0.5)

Focuses on techniques to meditate and explores the life-enhancing benefits of meditation.
8 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.
15 Contact Hours.

HHP 164 INTRODUCTION TO HAND REFLEXOLOGY (1)

Teaches hand anatomy, basic stroke techniques and hand reflex points. Reflexology is a gentle art that holistically facilitates opening the channels for healing energy to circulate to all parts of the body. The benefits of reflexology include stress reduction and deep relaxation, improved circulation, cleansing of body toxins and impurities, energy revitalization and preventative health care.
15 Contact Hours. Prerequisite: HHP 166

HHP 166 INTRODUCTION TO REFLEXOLOGY (1)

Teaches the student foot anatomy, basic hand stroke and foot reflex points.

15 Contact Hours.

HHP 169 INTRODUCTION TO HEALING HANDS AND FEET (1)

Studies combining the gentle healing hand energy work and gentle foot massage of reflexology in order to bring harmony to the body, mind, spirit, and emotions. Students will be provided with the knowledge of how to combine these healing modalities in their healing practice. Seven major energy charkas, how they affect our own self healing, and the four energy fields that surround us will be explored.
15 Contact Hours. Prerequisite HHP 166

HHP 190 CRYSTAL AND MINERAL USAGE IN HEALTH CARE (.5)

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.
8 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.
30 Contact Hours.

HHP 202 AROMATHERAPY (0.5)

While much 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.
45 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.
45 Contact Hours.

HHP 205 HERBOLOGY (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 archaeologists in Paleolithic burials and throughout literature on the ancient Chinese and Egyptians verified by modern scientific research.
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.
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.
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.
15 Contact Hours. Prerequisite: HHP 224

HHP 228 SOLUTION FOCUSED PERSONAL COACHING (.5)

Explores the practice of effective, quick, Emotional Freedom Technique (EFT) to allow themselves and others to become more focused.
8 Contact Hours.

HHP 229 WELLNESS COUNSELING (1)

Provides the tools to facilitate oneself and others in the movement towards wellness. Enables the student to learn assessment skills, basic counseling skills, establishing contacts and goals for change.
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.
30 Contact Hours. Prerequisite: HHP 223

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 breath of this deep primordial connection.
15 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.

15 Contact Hours.

HHP 243 HEALING TOUCH LEVEL II (2)

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.

30 Contact Hours. Prerequisite: HHP 242 or permission of instructor.

HHP 244 HOLISTIC HEALTH LEVEL I (1)

This course is an introduction to holistic philosophy, theory, and practice and how it integrates into the art and science of caring and healing. It involves conscious application of self-responsibility, caring, human development, stress reduction life styling, communication, problem solving, teaching/learning, leadership and change. These topics are approached holistically, through preventative, nurturing and generative activities in order to help clients move toward high-level wellness. Application of holistic health concepts to everyday practice in self-assessment, self-care and self-direction is encouraged.

15 Contact Hours.

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.

15 Contact Hours. Prerequisite: HHP 130

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.

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.

150 Contact Hours.

HHP 254 HOLISTIC HEALTH LEVEL II (2)

Using the basic theory of Holistic Health I, this course provides a more comprehensive study of modalities used to strengthen the whole person in the process of facilitating healing and maintaining optimal health. The application of holistic health concepts and body-mind responses are used as guides for

each modality studied. Discussion of the holistic therapeutic relationship is included.

30 Contact Hours. Prerequisite: HHP 244 or permission of instructor.

HHP 256 HOLISTIC HEALTH LEVEL III (2)

Builds on the basic theory introduced in Holistic Health Level II and provides a more comprehensive study of modalities to strengthen the whole person in the process of facilitating and maintaining optimal health.

30 Contact Hours. Prerequisite: HHP 254 or permission of instructor.

HHP 258 JOURNALING THE SPIRITUAL JOURNEY (1)

Incorporates the spiritual journal as a tool for people to explore who they are and what they believe about their purpose. Spiritual writing expands the consciousness and the universe responds by using writing as a channel to interact and guide the direction of people's lives. Focuses on connecting with the spiritual nature of people and provides tools for personal growth and for assisting others on the journey to spiritual wholeness.

15 Contact Hours.

HHP 260 ADVANCED REFLEXOLOGY (1)

Incorporates a hands-on approach with an emphasis on developing techniques. Continues the basic reflexology class and allows the student to work on hand positions and address specific techniques for specific issues.

15 Contact Hours. Prerequisite: HHP 166.

HHP 262 PSYCHONEUROIMMUNOLOGY (.5)

Studies the inter-relationship of the body-mind connection. Explores the physiological and psychological interaction between the brain, the immune system and the endocrine system.

8 Contact Hours.

HHP 263 CREATING A HOLISTIC PRACTICE (.5)

Focuses on the necessary skills for a nurse to start an independent practice. Includes self-assessment of professional skills, the business plan for marketing, finances, and the actual design of the practice.

8 Contact Hours.

HHP 264 ADVANCED AROMATHERAPY FOR CERT (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 and recommend appropriate oils and how to apply in a safe manner.

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.

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.

15 Contact Hours.

HIS - History

HIS 101 WESTERN CIVILIZATION: ANTIQUITY-1650 (3)
*(GT-HI1)

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.
45 Contact Hours.

HIS 102 WESTERN CIVILIZATION: 1650-PRESENT (3)
*(GT-HI1)

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.
45 Contact Hours.

HIS 111 THE WORLD: ANTIQUITY-1500 (3)
*(GT-HI1)

Enables the student to view history up to 1500 CE 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.
45 Contact Hours.

HIS 112 THE WORLD: 1500-PRESENT (3)
*(GT-HI1)

Enables students to view history post 1500 CE 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.
45 Contact Hours.

HIS 201 U.S. HISTORY TO RECONSTRUCTION (3)
*(GT-HI1)

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.
45 Contact Hours.

HIS 202 U.S. HISTORY SINCE THE CIVIL WAR (3)
*(GT-HI1)

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.
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.
45 Contact Hours. Prerequisite: None

HIS 208 AMERICAN INDIAN HISTORY (3)
(GT-HI1)

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.
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.
45 Contact Hours.

HIS 215 WOMEN IN U.S. HISTORY (3)
*(GT-HI1)

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.
45 Contact Hours.

HIS 225 COLORADO HISTORY (3)
(GT-HI1)

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.
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.
45 Contact Hours.

HIS 236 U.S. HISTORY SINCE 1945 (3)
*(GT-HI1)

Focuses on the major political, economic, social, and cultural developments that have shaped modern America from 1945 to the present.
45 Contact Hours.

HIS 244 HISTORY OF LATIN AMERICA (3)

(GT-HI1)

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.
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.
45 Contact Hours.

HIS 247 20TH CENTURY WORLD HISTORY (3)

*(GT-HI1)

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.
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).
45 Contact Hours.

HIS 249 HISTORY OF ISLAMIC CIVILIZATION (3)

*(GT-HI1)

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.
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.
45 Contact Hours.

HIS 251 HISTORY OF CHRISTIANITY THROUGH THE REFORMATION (3)

General introduction to and survey of the history of Christianity from its origins through the Reformation Era (1655). Examines key events, movements, people, and beliefs of the religion in relation to their political, social and cultural settings in Europe.
45 Contact Hours.

HIS 255 THE MIDDLE AGES (3)

(GT-HI1)

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.

144

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.
45 Contact Hours.

HIS 260 U.S. FOREIGN RELATIONS HISTORY (3)

(GT-HI1)

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.
45 Contact Hours.

HIT - Health Information Technology

HIT 101 HEALTH INFORMATION MANAGEMENT SCIENCE (6)

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.
90 Contact Hours.

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.
45 Contact Hours.

HIT 111 HEALTH DATA MANAGEMENT & INFO 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.
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.

30 Contact Hours.

HIT 188 HEALTH INFORMATION PRACTICUM I (.25)

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.

60 Contact Hours.

HIT 221 CLINICAL CLASSIFICATIONS I (5)

Studies nomenclatures and classification systems with emphasis on the most recent revision of ICD-9-CM. Students study the coding conventions and principles for this system. These skills are then applied to the coding of actual medical records from area facilities.

75 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.

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.

45 Contact Hours.

HIT 231 CLINICAL CLASSIFICATIONS II (5)

Provides an intermediate study of ICD-9-CM 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. Students apply these skills in assigning codes for actual medical records from area facilities.

75 Contact Hours.

HIT 241 CPT CODING BASIC PRINCIPLES (2)

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.

30 Contact Hours.

See the list of Specialized Health Information Technology Courses on the first page of this Course Offerings section.

HIT 288 HEALTH INFORMATION 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.

60 Contact Hours.

HLT - Horticulture and Landscape Technologies

HLT 101 INTRODUCTION TO HORTICULTURE (4)

Introduces the biology of horticultural plants, and basic horticultural practices.

60 Contact Hours.

HLT 105 GREENHOUSE MANAGEMENT AND CROPS (4)

Discusses greenhouse design, systems, management, and the major greenhouse crops and their cultural needs.

75 Contact Hours.

HLT 118 ROCK AND WATER GARDENING (2)

Discusses the design and construction of rock gardens and water gardens. The course also surveys the plant materials and maintenance practices associated with these types of gardens.

38 Contact Hours.

HLT 120 PRINCIPLES OF XERISCAPE (2)

Covers the principles and practices used in establishing water-conserving landscapes. Special attention is given to the proper siting, establishment and care of plant materials in water conserving landscapes, and the installation of low water use irrigation systems.

38 Contact Hours.

HLT 126 PLANTING DESIGN (2)

Allows students to focus on the planting design phase of landscape design. Students learn to analyze plants for their design characters and how to marry various types of plant materials into various situations. Perennial, annual, and mixed plantings (trees, shrubs and herbaceous plants) will be considered. Students will learn how to represent these combinations graphically.

38 Contact Hours.

HLT 130 LANDSCAPE GRAPHICS STUDIO (3)

Introduces students to the basics of graphic communications used in landscape design and construction. Students learn the proper use of graphic tools and materials to manually produce site analysis, concept plan, preliminary plan, planting plan, and master plan documents in both plan and perspective views.

60 Contact Hours.

HLT 140 LANDSCAPE DESIGN AND PLANNING (4)

Explores the principles and elements of design. The student learns about form, spatial and materials composition, and environmentally and architecturally responsive design. Students complete a set of landscape design documents for an actual or fictional client.

75 Contact Hours. Prerequisite: HLT 130.

145

HLT 150 INTRODUCTION TO LANDSCAPE IRRIGATION (2)

Students are introduced to the foundational information that they need to prepare them for further learning in subsequent irrigation courses. The course focuses on the mathematics and physics associated with irrigation system hydraulics; identification and use of irrigation system components; and how plant-soil-water relationships affect irrigation system design and operation management.

30 Contact Hours.

HLT 151 IRRIGATION AUDITING AND SCHEDULING (3)

Focuses on monitoring and managing the operation of an irrigation system for maximum water saving efficiency. Students learn theory behind troubleshooting, auditing and scheduling and then perform a system tune-up, irrigation audit, and calculate watering schedules based on current climatic information.

53 Contact Hours. Prerequisite: HLT 150.

HLT 202 LANDSCAPE PLANT HEALTH CARE (3)

Introduces students to the fundamentals of plant health care using important diseases and pests that affect landscape plants. Students study the components and concepts of plant health care, integrated pest management, pest problem diagnosis, pest identification and pest life cycles.

53 Contact Hours.

HLT 203 PLANT DISEASE AND PEST FIELD STUDY (2)

Provides students the opportunity to conduct field studies of local weed, insect and disease problems. Students evaluate various situations and discuss actual problem diagnosis and site-specific remedies or preventatives for the problems they identify.

45 Contact Hours. Prerequisite: HLT 101 or HLT 202 or HLT 208 or permission of instructor.

HLT 208 COMMERCIAL PESTICIDE LICENSE TRAINING (3)

Studies the requirements for the qualified supervisor license as outlined in the training manuals published by the Colorado Department of Agriculture. Students may elect to take the certified operator test if they do not meet the experience qualifications for the qualified supervisors license. Areas studied will include the general weeds, agricultural insect, plant disease, and industrial right-of-way tests administered by the Colorado Department of Agriculture. Students may elect to take any of the other tests available.

45 Contact Hours.

HLT 210 LANDSCAPE MANAGEMENT (3)

Teaches the best management practices for landscapes. Students learn about the maintenance needs of various landscape features, and what management options exist for each feature. This course emphasizes improving landscape quality while minimizing management costs. Other topics include landscape business practices, water management, and seasonal landscape care tasks.

45 Contact Hours.

HLT 215 NURSERY MANAGEMENT (2)

Introduces students to the basics of nursery production and management. Topics include: management structures and organization; site selection; laws, regulations and standards; shipping and receiving nursery stock; marketing nursery crops; and crop production management.

38 Contact Hours (15 lecture hours, 23 lab hours).

HLT 216 GARDEN CENTER MANAGEMENT (2)

Introduces students to the basics of garden center management. Topics include: personnel management; locating a garden center; purchasing product lines; marketing and advertising; and merchandising and shop layout.

38 Contact Hours.

HLT 221 WOODY LANDSCAPE PLANTS I (3)

Discusses the identification (common and botanical names), landscape usage and culture of regionally adapted plants. This course discusses deciduous shade and ornamental trees, and conifers (evergreen trees and shrubs). NOTE: HLT221 is a standalone course that may be taken before, after or concurrently with HLT222.

60 Contact Hours.

HLT 222 WOODY LANDSCAPE PLANTS II (3)

Discusses the identification (common and botanical names), landscape usage and culture of regionally adapted plants. This course discusses deciduous and evergreen broadleaf shrubs and vines. NOTE: HLT222 is a standalone course that may be taken before, after or concurrently with HLT221.

60 Contact Hours.

HLT 223 ANNUALS, BULBS, AND GRASSES (2)

Discusses the identification (common and botanical names), landscape usage and culture of annuals, bulbs, and perennial and annual grasses common to Colorado landscapes.

38 Contact Hours.

HLT 224 HERBACEOUS PERENNIALS (4)

Discusses the identification (common and botanical names), landscape usage and culture of herbaceous perennials common to Colorado landscapes.

75 Contact Hours.

HLT 226 INTERIOR PLANTS (2)

Discusses the identification, usage, and culture of common interior plants. Topics include selection for various interior environments, interior plant maintenance, and specialty interior plant products.

38 Contact Hours.

HLT 230 INTRODUCTION TO HORTICULTURE CAD TECHNOLOGY (2)

Explores four different CAD design programs: Landcadd, LandDesigner Pro, IrrigatorJet Pro, and RainCAD. Students will work with each design package and develop a simple design using two different design packages.

45 Contact Hours.

HLT 235 PRINCIPLES OF GRADING AND DRAINAGE (3)

Teaches the grading process and grading methods. The class discusses how to represent grade changes graphically on a site plan and how to interpret those representations during the construction process. The course also discusses how to calculate cut and fill quantities, how to use surveying equipment to establish benchmarks and baselines, and how to use reference points for site layout.

60 Contact Hours. Prerequisite: MAT 107.

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.

83 Contact Hours. Prerequisites: HLT 125 and HLT 235 or permission of instructor.

HLT 237 LANDSCAPE CONSTRUCTION BIDDING AND ESTIMATING (2)

Discusses the process of bidding for landscape construction. Plan reading, quantity takeoffs, bidding and estimating practices and processes are covered.

38 Contact Hours. Prerequisite: MAT 107 or permission of instructor.

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.

75 Contact Hours.

HLT 242 TURFGRASS MANAGEMENT (4)

Discusses the fundamentals of turfgrass establishment and maintenance as it is practiced at different cultural intensities. Topics include the growth and development of turfgrass plants, the turfgrass environment, turfgrass species selection and identification, turfgrass cultural practices, and turfgrass pest management.

60 Contact Hours. Prerequisite: HLT 240

HLT 243 GOLF TURF MANAGEMENT (3)

Discusses all aspects of golf course turfgrass management. Students are introduced to the design, construction, and cultural requirements of putting greens, tees, fairways, bunkers, and roughs. The course will also address pests and stresses unique to turfgrass in a golf setting, golf course irrigation systems, maintenance equipment, financial management, and the use of golf courses as wildlife habitat.

45 Contact Hours. Prerequisite: HLT 242.

HLT 244 SPORTS TURF MANAGEMENT (3)

Discusses all aspects of sports turf management and culture, including the design, construction, and renovation of baseball, football and soccer fields; safety standards and practices; and non-turf maintenance practices.

45 Contact Hours. Prerequisite: HLT 242.

HLT 245 GREEN INDUSTRY BUSINESS OPERATIONS (3)

Introduces students to the basics of Landscape business management including establishing a business, retail and wholesale marketing and merchandising, and the operations of a landscape business.

53 Contact Hours.

HLT 246 GOLF AND SPORTS TURF MANAGEMENT (2)

Discusses all aspects of 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.

45 Contact Hours.

HLT 247 LANDSCAPE IRRIGATION INSTALLATION (4)

Familiarize students with most current methods and highest quality materials, equipment, and technology used to install residential, commercial and drip irrigation systems. Students will then apply this knowledge by actually installing or observing an installation of an irrigation system in the field.

68 Contact Hours.

HLT 249 LANDSCAPE IRRIGATION SYSTEM TROUBLESHOOTING (2)

In this course students study electrical and hydraulic system troubleshooting, and the proper repair of the isolated problem. Routine maintenance practices, including winterization and spring start-up are also covered.

30 Contact Hours. Prerequisite: HLT 150.

HLT 250 LANDSCAPE IRRIGATION DESIGN (3)

Focuses on the hydraulic analysis of residential irrigation systems to determine design capacity and working pressure. Irrigation system components are examined and their application explained. Students analyze site conditions, and apply their knowledge of hydraulic analysis to produce sample irrigation designs.

53 Contact Hours. Prerequisite: MAT 107 or permission of instructor.

HLT 255 DRIP IRRIGATION (2)

Offers students the skills required to properly design, install, schedule, maintain, and troubleshoot residential and small commercial drip irrigation systems. The course focus is on correct site analysis, component selection, the influence of soil-plant-water relationships on design, system uniformity, and efficient operation.

30 Contact Hours.

HLT 256 GOLF AND COMMERCIAL IRRIGATION (2)

Exposes students to large-scale irrigation practices, such as those common to golf courses and high volume commercial applications. Topics of study include: high volume hydraulics, pumps, wells, backflow prevention, centralized control, and large-scale irrigation system components.

30 Contact Hours. Prerequisite: HLT 150

HLT 260 PLANT PROPAGATION (4)

Teaches the theory, biology, and practical applications of plant propagation technologies. This course discusses propagation by seed, cuttings, budding, grafting, layering and tissue culture. The course also discusses the propagation environment, techniques of stock plant management and seed handling.

68 Contact Hours. Prerequisite: HLT 101 or permission of instructor.

HLT 264 ARBORICULTURE (3)

Discusses plant growth and development as it relates to trees and shrubs, and progresses to methods of planting, tree protection, pruning, and tree care.

45 Contact Hours.

HOS - Hospitality/Food 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,

FRONT RANGE COMMUNITY COLLEGE

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 non-commercial foods segment.

45 Contact Hours.

HOS 111 IS NOW CUA 101 FOOD AND SAFETY 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 of Completion from the education Foundation.

30 Contact Hours

HOS 112 BAKING/PASTRY (4)

Introduces commercial baking and pastry production, nutrition, standard product and equipment identification, and supervisory techniques in the area of food production. The course includes classroom instruction, demonstrations, and actual baking of breads, pastries, and desserts.

90 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.

45 Contact Hours.

HOS 121 FOOD PREPARATION (4)

Continues supplying the learner with information regarding a commercial food service environment, standard product and equipment identification, and supervisory techniques in the area of food production. The course includes classroom instruction, demonstrations and applies theory to commercial and institutional food service in an industrial environment, including basic cooking principles, recipes, menu development, and on-the-job training.

90 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.

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.

45 Contact Hours.

HOS 148 INTRODUCTION TO FOOD & BEVERAGE (3)

Challenges that a food and beverage manager faces in developing a solid customer base is presented in this course. Topics include principles of food production and service

management, including menu planning, purchasing, storage, beverage management, and food service layout and equipment. Students will prepare a plan for a food service facility.

45 Contact Hours.

HOS 188 PRACTICUM I (FOOD OR OPERATIONS) (2)

Expose 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.

60 Contact Hours.

HOS 240 PURCHASING AND MENU PLANNING (3)

Introduces the world of food service purchasing. The course initially provides the student with an overview of the purchasing cycle and describes how to place and receive orders following procedures defined in the marketplace. The course describes the impact of innovative packaging processing on foods, describes the effect technology has on the present food service menu, and discusses concepts that impact the future.

45 Contact Hours.

HOS 241 PANTRY AND DELI PRODUCTION (4)

Provides the student information in the preparation of pantry, breakfast, dairy and garnish items, and the preparation of salads and cold items for buffets and menu items. Prerequisite HOS 121.

90 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.

45 Contact Hours.

HOS 250 FOOD, BEVERAGE AND LABOR COST CONTROL (3)

Introduces the student to concepts of food, beverage, and labor cost control in the hospitality business.

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.

45 Contact Hours.

HOS 252 ADVANCED FOOD PREPARATION (4)

Provides advanced food preparation, commercial food production, and service techniques to the learner with realistic production, service and supervisory experience. Students are rotated through production and service stations and required to plan and cost menus, purchase all ingredients, schedule production and service staff, handle guest relations, and keep accurate financial records on the profit or loss of the operation. Merchandising, controlling labor and food costs are integral parts of the course.

90 Contact Hours.

See the list of Specialized Hospitality & Food Management Courses on the first page of this Course Offerings section.

HOS 280 INTERNSHIP (FOOD OR OPERATIONS) (2)

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.
90 Contact Hours. Prerequisite: CUA 101, HOS 110, HOS 112 and HOS 120. Corequisite: HOS 121.

HOS 288 PRACTICUM II (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.
60 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.
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.
30 Contact Hours

HPR 102 CPR FOR PROFESSIONALS (.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.
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 information to the student about aspect of career choices.
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.
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.
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.
Contact hours 90. Corequisite: HPR 113

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-car 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.
Contact hours 100. Corequisite: HPR 112.

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.

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.
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.
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.
60 Contact Hours. Prerequisite: BIO 106.

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.
30 Contact Hours.

HPR 200 ADVANCED ECG INTERPRETATIONS (2)

Focuses on each wave and interval of the complex, the axis, and the 12-lead presentation of some rhythm disturbances.

30 Contact Hours. Prerequisite: HPR 190

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 key historical and aesthetic periods as well as a variety of genres and themes. The course incorporates the vocabulary stylistic systems (for instance, cinematography, editing and art direction) and narrative systems (for instance, story structure and character motivation) as both relate to the kinds of meanings a film conveys.
45 Contact Hours.

HUM 115 WORLD MYTHOLOGY (3)

*(GT-AH2)

Introduces students to the mythologies of various cultures with a special emphasis on Greece, Asia and North America. Common themes are illustrated and some artistic reactions are used as examples.
45 Contact Hours.

HUM 121 EARLY CIVILIZATIONS (3)

*(GT-AH2)

Introduces students to the history of ideas in Western cultures through a study of the visual arts, literature, drama, music, and philosophy of early civilizations, Greek and Roman antiquity and Christian eras. Emphasizes connections among the arts, values, and diverse cultures.
45 Contact Hours.

HUM 122 FROM THE MEDIEVAL TO THE MODERN (3)

*(GT-AH2)

Examines the Medieval, Renaissance, and Baroque periods through a study of the visual arts, literature, music, and philosophy. Compares and contrasts diverse cultural ideas and feminine and masculine viewpoints.
45 Contact Hours.

HUM 123 THE MODERN WORLD (3)

*(GT-AH2)

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.
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.
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.
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.
90 Contact Hours.

HVA 102 BASIC REFRIGERATION (4)

Introduces the basic theory of refrigeration systems, components, charging, recycling, and evacuation of refrigeration units.
90 Contact Hours. Prerequisite: HVA 101 or permission of instructor.

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.
68 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.
90 Contact Hours. Prerequisite: HVA 103 or permission of instructor.

HVA 122 COMMERCIAL REFRIGERATION (4)

Covers commercial icemakers, walk-in coolers, walk-in freezers, and self-contained refrigeration units.
90 Contact Hours. Prerequisites: HVA 101, HVA 102, HVA 103, HVA 104

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, and central and window air conditioners.
90 Contact Hours. Prerequisites: HVA 101, HVA 102, HVA 103, and HVA 104

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.
90 Contact Hours. Prerequisite: HVA 101, HVA 102, HVA 103, HVA 104, HVA 123

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.
68 Contact Hours. Prerequisite: HVA 101, HVA 102, HVA 103, HVA 104, HVA 124

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.

68 Contact Hours. Prerequisite: HVA 101, HVA 102, HVA 103, HVA 104, HVA 124

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.

68 Contact Hours. Prerequisites: HVA 124

HVA 247 HOT WATER HEATING SYSTEMS (4)

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.

90 Contact Hours. Prerequisite: HVA 101, HVA 102, HVA 103, HVA 104, HVA 124

HVA 280 INTERNSHIP (3)

Gives the students an opportunity to apply their course studies in a specific area.

90 Contact Hours. Prerequisite: HVA 102, HVA 104

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 4-year colleges.

45 Contact Hours.

HWE 101 CARDIO-PULMONARY RESUSCITATION (CPR) (1)

Teaches emergency procedures for respiratory, obstructed airway and cardiac arrest victims of all ages. It meets certification requirements of the American Red Cross and the American Heart Association.

15 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.

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.

8 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.

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.

45 Contact Hours.

HWE 113 FIRST AID & 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.

8 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.

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 risk 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.

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.

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.

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.
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".
15 Contact Hours.

HWE 145 SELF DEFENSE (1)

Introduces the basic skills and techniques of the art of self-defense.
15 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.
68 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. 90 contact hours.

Prerequisites: 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.
68 Contact Hours. Prerequisite: IND 105 and CAD 102

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 ADA factors.
68 Contact Hours. Prerequisite: IND 114 and Corequisites IND 200 and IND 225.

IND 161 INTRODUCTION TO KITCHEN & BATH DESIGN (3)

Provides an introduction to Kitchen and Bath Design, applying NKBA guidelines. Students are introduced to an overview of Interior Design principles as they apply to Kitchen and Bath design. One portfolio project is produced using hand-drafting skills. Students are encouraged to produce the project using skills attained in this course.
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 NKBA guidelines.   Students become familiar with trade resources supporting the design field. At least two portfolio project are produced. Students will be encouraged to produce project documents using a variety of computer software applications.
90 Contact Hours. Prerequisite: IND 114 and Corequisites IND 120 and IND 225.

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.
68 Contact Hours. Prerequisite: IND 120, IND 200 and IND 225.

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.
68 Contact Hours. Prerequisite: IND 114 and Corequisites IND 120 and IND 200.

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.
68 Contact Hours. Prerequisite: AEC 102, IND 114

IND 261 KITCHEN AND BATH DESIGN II (3)

Continues Kitchen and Bath Design instruction focusing on Project and Business Management, as specified by NKBA guidelines; prepares students for the AKBD, CKD or CBD certifying examinations. At least two portfolio projects are produced using a computer-based software application.
68 Contact Hours. Prerequisite: IND 200.

IPP   - Interpreter Preparation

IPP 115 INTRODUCTION TO LANGUAGE AND COMMUNICATION (3)

Enables sign language interpreting students to establish a foundation of linguistic and mentalinguistic 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.
45 Contact Hours. Prerequisite: ENG 121. Corequisite: IPP 121.

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.
45 Contact Hours. Prerequisite: ASL 122. Corequisite: ASL 123.

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.

45 Contact Hours. Prerequisite: IPP 121. Corequisite: ASL 221.

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.

30 Contact Hours. Prerequisite: IPP 121. Corequisite: IPP 135.

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.

45 Contact Hours. Prerequisites: ASL 123 and IPP 121. Corequisites: ASL 221 and IPP 122.

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.

30 Contact Hours. Prerequisite: ANT 101. Corequisites: ASL 221 and IPP 147.

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.

45 Contact Hours. Prerequisite: ANT 101. Corequisites: ASL 221 and IPP 145.

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.

60 Contact Hours. Prerequisites: ASL 221 and IPP 122. Corequisite: IPP 207.

IPP 207 SPECIALIZED AND TECHNICAL COMMUNICATION (2)

Expands their repertoire of specialized and technical sign terminology and apply them in appropriate contexts.

30 Contact Hours. Prerequisites: ASL 221 and IPP 122.

IPP 225 ENGLISH TO ASL INTERPRETING (3)

Provides the student an opportunity to further develop interpreting skills from English to ASL.

45 Contact Hours. Prerequisites: ASL 221, IPP 122 and IPP 135. Corequisites: ASL 222 and IPP 227.

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.

45 Contact Hours. Prerequisites: ASL 221, IPP 122 and IPP 135. Corequisites: ASL 222 and IPP 225.

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.

45 Contact Hours. Prerequisites: ASL 221, IPP 122 and IPP 135.

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.

60 Contact Hours. Prerequisites: ASL 222, IPP 225, IPP 227 and IPP 229. Corequisites: IPP 278 and IPP 282.

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.

30 Contact Hours. Prerequisites: ASL 222, IPP 225, IPP 227 and IPP 229. Corequisites: IPP 235 and IPP 282.

IPP 282 INTERNSHIP (6)

Provides field experience interpreting in a supervised educational, community, service agency, or other setting.

270 Contact Hours. Prerequisites: ASL 222, IPP 225, IPP 227 and IPP 229. Corequisites: IPP 235 and IPP 278.

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.

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.

45 Contact Hours. Prerequisite: ITA 101.

ITA 111 ITALIAN LANGUAGE I (5)

Introduces a sequence dealing with the development of functional proficiency in listening, speaking, reading, and writing the Italian language.

75 Contact Hours.

ITA 112 ITALIAN LANGUAGE II (5)

Continues Italian Language I in the development of functional proficiency in listening, speaking, reading and writing the Italian language.

75 Contact Hours. Prerequisite: ITA 111.

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.

45 Contact Hours. Prerequisite: ITA 102.

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.

45 Contact Hours. Prerequisite: ITA 201.

ITA 211 ITALIAN LANGUAGE III (3)
*(GT-AH4)

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.

45 Contact Hours. Prerequisites: ITA 112.

ITA 212 ITALIAN LANGUAGE IV (3)
*(GT-AH4)

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.

45 Contact Hours. Prerequisites: ITA 211.

JOU   - Journalism

JOU 105 INTRODUCTION TO MASS MEDIA (3)
*(GT-SS3)

Places the mass media in an historical and cultural perspective, considering the validity, integrity and influence of the media in a democracy.

45 Contact Hours.

JOU 106 FUNDAMENTALS OF REPORTING (3)

Introduces news writing, reporting and interviewing with emphasis on clarity, accuracy, completeness, timeliness and fairness.

45 Contact Hours. Prerequisite: JOU 105 or permission of instructor.

JOU 121 PHOTOJOURNALISM (3)

Provides an introductory, hands-on course in black-and-white photography, with an emphasis on photojournalistic techniques, processing and printing. This course includes an investigation of word/picture relationships in creating photo essays for publications.

45 Contact Hours.

JOU 215 PUBLICATIONS PRODUCTION AND DESIGN (3)

Provides for students participation in the planning, writing, design and production processes of a non-newspaper publication.

68 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 publications.

45 Contact Hours. Prerequisite: Permission of instructor.

JOU 241 MAGAZINE ARTICLE WRITING (3)

Studies trade, consumer and technical markets; manuscript development with emphasis on nonfiction; submission techniques; and trends affecting the marketing of manuscripts.

45 Contact Hours. Prerequisites: JOU 105 and JOU 106.

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.

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.

45 Credit Hours. Prerequisite: JPN 101 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.

Note: The order of the topics and methodology will vary according to individual texts and instructors.

75 Contact Hours.

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.

Note: The order of the topics and the methodology will vary according to individual texts and instructors.

75 Contact Hours. Prerequisite: JPN 111 with grade of "C" or better

JPN 211 JAPANESE LANGUAGE III (3)
*(GT-AH4)

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.

45 Contact Hours. Prerequisites: JPN 112

JPN 212 JAPANESE LANGUAGE IV (3)
*(GT-AH4)

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.

45 Contact Hours. Prerequisites: JPN 211

Legal Assistant

See Paralegal Studies.

LIT   - Literature

LIT 115 INTRODUCTION TO LITERATURE I (3)
*(GT-AH2)

Introduces students to fiction, poetry, and drama. Emphasizes active and responsive reading.

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.
45 Contact Hours.

LIT 201 MASTERPIECES OF LITERATURE I (3)

*(GT-AH2)

Examines significant writings in world literature from the ancients through the Renaissance. Emphasizes careful readings and understanding of the works and their cultural backgrounds.
45 Contact Hours. Prerequisite: LIT 115 recommended.

LIT 202 MASTERPIECES OF LITERATURE II (3)

*(GT-AH2)

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.
45 Contact Hours. LIT 115 recommended.

LIT 205 ETHNIC LITERATURE (3)

*(GT-AH2)

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.
45 Contact Hours.

LIT 211 SURVEY OF AMERICAN LITERATURE I (3)

*(GT-AH2)

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.
45 Contact Hours.

LIT 212 SURVEY OF AMERICAN LITERATURE II (3)

*(GT-AH2)

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.
45 Contact Hours. Prerequisite: LIT 115 recommended.

LIT 221 SURVEY OF BRITISH LITERATURE I (3)

*(GT-AH2)

Provides an overview of British literature from the Anglo-Saxon period through the 17th century. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers.
45 Contact Hours. Prerequisite: LIT 115 recommended.

LIT 222 SURVEY OF BRITISH LITERATURE II (3)

*(GT-AH2)

Provides an overview of British literature from the 18th century to the present. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers.
45 Contact Hours.

LIT 225 INTRODUCTION TO SHAKESPEARE (3)

*(GT-AH2)

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.
45 Contact Hours.

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.
45 Contact Hours.

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.
45 Contact Hours. Prerequisite: LIT 115 recommended.

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.
45 Contact Hours. Prerequisite: LIT 115 recommended.

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.
45 Contact Hours. Prerequisite: LIT 115 recommended.

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.
45 Contact Hours.

LIT 257 LITERATURE AND FILM (3)

Examines the relationship between literature and motion pictures, emphasizing the technique and interpretive function of filmmakers.
45 Contact Hours.

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.
45 Contact Hours.

LIT 268 CELTIC LITERATURE (3)

*(GT-AH2)

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.
45 Contact Hours. Prerequisite: LIT 115 recommended.

MAA - Masonry Certificate

MAA 113 MASONRY I (4)

Introduces students to the masonry trade. Covers the history of the trade, safety, tools and equipment, masonry math, mortar joints and applications, and brick materials layout. The ability to lift 80 pounds and climb a 25-foot ladder is required.
90 Contact Hours.

MAA 123 MASONRY II (4)

Introduces students to the masonry trade. Covers the history of the trade, safety, tools and equipment, masonry math, mortar joints and applications, and brick materials layout. The ability to lift 80 pounds and climb a 25-foot ladder is required.
90 Contact Hours. Prerequisite MAA 113

MAA 133 MASONRY III (4)

Covers materials handling and storage, advanced laying techniques, control joints, corners and poles, flashing and lintels, elevated masonry, commercial and residential drawings, all-weather masonry, wall insulation, openings, columns, sample panels and prisms.
90 Contact Hours. Prerequisite MAA 123

MAA 143 MASONRY IV (4)

Covers materials handling and storage, advanced laying techniques, control joints, corners and poles, flashing and lintels, elevated masonry, commercial and residential drawings, all-weather masonry, wall insulation, openings, columns, sample panels and prisms.
90 Contact Hours. Prerequisite MAA 133

MAA 153 MASONRY V (4)

Covers safety panels and prisms, brick creativity, stone work, residential masonry, glass block, acid brick and refractories, structured glaze tile, repair and restoration, panel construction, welding and brick paving.
90 Contact Hours. Prerequisite MAA 143

MAA 163 MASONRY VI (4)

Covers safety panels and prisms, brick creativity, stone work, residential masonry, glass block, acid brick and refractories, structured glaze tile, repair and restoration, panel construction, welding and brick paving.
90 Contact Hours. Prerequisite MAA 153

See the list of Specialized Masonry Arts Courses on the first page of this Course Offerings section.

MAA 275 SPECIAL TOPICS (6)

Provides students with a vehicle of pursue in depth exploration of special topics of interest.
15 Contact Hours per credit: Varies. Prerequisite: Permission of instructor.

MAA 280 INTERNSHIP (6)

Provides students with the opportunity to supplement course work with practical work experience related to their educational program. Student work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.
270 Contact Hours: Varies. Prerequisite: Permission of Instructor.

MAA 285 INDEPENDENT STUDY (6)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.
30 Contact Hours per credit: Varies. Prerequisite: Permission of instructor.

MAN - Management

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.
45 Contact Hours.

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.
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.
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.
15 Contact Hours.

MAN 126 TOTAL QUALITY MANAGEMENT (3)

Covers the rationale for, method of implementing and key characteristics of TQM. Topics include developing a vision of a quality culture, strategic planning for implementation, customer focus, supplier relationships, benchmarking, continuous improvement, employee empowerment, and teamwork. Through case studies students learn to apply TQM in manufacturing and service environments.
45 Contact Hours.

MAN 127 TRANSPORTATION OPERATIONS AND MANAGEMENT (3)

Covers the significance of an integrated, well-organized, transportation system to a market-driven economy. The development of the transportation system of the U.S. from both historic and economic perspectives is included. Modes, tariffs, rates, laws, and deregulation aspect of transportation are covered.
45 Contact Hours.

MAN 160 ENTREPRENEURSHIP (6)

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.

90 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.
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 mangers use to achieve organizational effectiveness.
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.
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.
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, ROI and financial statements.
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.
45 Contact Hours.

MAN 227 OPERATIONS MANAGEMENT (3)

Covers the central role and importance of the operations function in both service and product organizations. Strategy, design, scheduling, materials handling, inventory, production, supply chain management and distribution are covered.
45 Contact Hours.

MAN 231 MANUFACTURING MANAGEMENT (3)

Covers the primary considerations in the design, implementation and integration of the manufacturing planning and control system with special emphasis on planning, scheduling and the control of production activities, material requirements planning and just-in-time.
45 Contact Hours. Prerequisite: MAN 227.

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.
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.
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.
45 Contact Hours. Prerequisite: MAN 241 or permission of instructor.

MAN 245 WAREHOUSING AND DISTRIBUTION CENTERS (3)

Covers the organization and operations of warehouses and distribution centers. Topics covered include the role, types and functions of warehouses and distribution centers, location analysis, facility layout and design, handling equipment, employee safety and OSHA, public and private warehouses, bonded storage, computer control and tracking, conveyance equipment, and hazardous materials.
45 Contact Hours.

See the list of Specialized Management Courses on the first page of this Course Offerings section.

MAN 278 SEMINAR (2)

Provides students with experiential learning opportunities in the management area.
30 Contact Hours. Prerequisites: ACC 121, BUS 115, BUS 216, MAN 126, MAN 226, and MAR 216.

MAR   - Marketing

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.
45 Contact Hours. Prerequisite: BUS 115.

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.
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.

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.

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.

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.

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.

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.

45 Contact Hours. Prerequisites: MAR 111 and MAR 216.

MAR 238 MARKETING APPLICATIONS AND ANALYSIS (3)

Students explore the application of marketing variables through lecture and case analysis. Each student develops a situational analysis or marketing plan as a semester project.

45 Contact Hours. Prerequisite: MAR 216.

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.

45 Contact Hours. Prerequisite: BUS 115.

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.

45 Contact Hours.

MAR 249 STRATEGIC MARKETING (3)

Illustrates the connections between a market-driven strategy, customer satisfaction and profitable growth. Student will examine how marketing strategies are developed and executed within both small and large organizations. The course will emphasize strategy development, implementation and evaluation.

45 Contact Hours.

MAT   - Mathematics

MAT 030 FUNDAMENTALS OF MATHEMATICS (2)

Includes the vocabulary, operations and applications of whole numbers, decimals and basic fractions and mixed numbers.

30 Contact Hours. Prerequisite: Appropriate math diagnostic scores required.

MAT 060 PRE-ALGEBRA (3)

Furthers the study of fractions and mixed numbers. Also included are vocabulary, operations and applications of ratio, proportion, percent, area, perimeter, US and metric measures, integers, and an introduction to algebraic expressions and the solution of basic first-degree equations.

45 Contact Hours. Prerequisite: Appropriate math diagnostic scores required or grade of "C" or better in MAT 030.

MAT 090 INTRODUCTORY ALGEBRA (4)

Includes first-degree equations, inequalities, formulas, polynomials, factoring polynomials, solving quadratic equations by factoring, coordinate geometry, graphing linear equations and applications. Algebraic fractions and systems of linear equations may be included.

60 Contact Hours. Prerequisite: Appropriate math diagnostic scores required or grade of "C" or better in MAT 060.

MAT 099 INTERMEDIATE ALGEBRA (4)

Emphasizes problem solving with further study of equations, slope, inequalities, systems of equations, polynomials, quadratic equations, rational expressions, rational exponents, radical expressions, graphing and applications. A graphic calculator or equivalent software may be utilized.

60 Contact Hours. Prerequisite: Appropriate mathematics diagnostic scores required or grade of "C" or better in MAT 090.

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.

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.

45 Contact Hours. Prerequisite: MAT 090 with a grade of "C" or higher or appropriate diagnostic scores.

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.

45 Contact Hours. Prerequisite: MAT 060 with a grade of "C" or better or equivalent.

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.

60 Contact Hours. Prerequisite: MAT 060

MAT 109 GEOMETRY (3)

Teaches basic geometric principles involving lines, triangles, circles, polygons, and three-dimensional figures.   Geometric constructions and measurement in the metric and US systems are covered.

45 Contact Hours. Prerequisite: None

MAT 120 MATHEMATICS FOR THE LIBERAL ARTS (4)
*(GT-MA1)
(Cannot be applied toward A.S. Degree)

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.

60 Contact Hours. Prerequisite: MAT 099 with a grade of "C" or better or appropriate math diagnostic scores.

MAT 121 COLLEGE ALGEBRA (4)
*(GT-MA1)

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.

60 Contact Hours. Prerequisite: MAT 099 with a grade of "C" or better or appropriate math diagnostic scores.

MAT 122 COLLEGE TRIGONOMETRY (3)
*(GT-MA1)

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.

45 Contact Hours. Prerequisite: MAT 121 with a grade of "C" or better or appropriate math diagnostic scores.

MAT 123 FINITE MATHEMATICS (4)
*(GT-MA1)
(Cannot be applied toward A.S. Degree)

Covers topics including functions, matrix algebra, linear programming, and an introduction to probability and counting techniques. Emphasis is on applications. This course may include other topics such as statistics when time permits. This course is primarily intended for business, life science, or social science majors.

60 Contact Hours. Prerequisite: MAT 099 with a grade of "C" or better or appropriate math diagnostic scores.

MAT 125 SURVEY OF CALCULUS (4)
*(GT-MA1)

Includes derivatives, integrals, and their applications, with attention restricted to algebraic, exponential, and logarithmic functions for business, life science and/or social science majors.

60 Contact Hours. Prerequisite: MAT 121 or MAT 123 with a grade of "C" or better or equivalent.

MAT 135 INTRODUCTION TO STATISTICS (3)
*(GT-MA1)
(Cannot be applied toward A.S. Degree)

Includes data presentation and summarization, introduction to probability concepts and distributions, statistical inference-estimation, hypothesis testing, comparison of populations, correlation and regression.

45 Contact Hours. Prerequisite: MAT 099 with a grade of "C" or better or appropriate math diagnostic scores.

MAT 155 INTEGRATED MATHEMATICS I (3)
*(GT-MA1)
(Cannot be applied toward A.S. Degree)

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.

45 Contact Hours. Prerequisite: MAT 099 with a grade of "C" or better or appropriate math diagnostic scores.

MAT 156 INTEGRATED MATHEMATICS II (3)
*(GT-MA1)
(Cannot be applied toward A.S. Degree)

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.

45 Contact Hours. Prerequisite: MAT 099 with a grade of "C" or better.

MAT 166 PRE-CALCULUS (5)
*(GT-MA1)

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.

75 Contact Hours. Prerequisite: MAT 121 or appropriate math diagnostic scores.

NOTE: This course is available via CCCOnline

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MAT 201 CALCULUS I (5)
*(GT-MA1)

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.

75 Contact Hours. Prerequisites: MAT 122 with a grade of "C" or better or equivalent or appropriate math diagnostic score.

MAT 202 CALCULUS II (5)
*(GT-MA1)

Continuation of single variable calculus that will include techniques of integration, polar coordinates, analytic geometry, improper integrals, and infinite series.

75 Contact Hours. Prerequisite: MAT 201 with a grade of "C" or better or equivalent.

MAT 203 CALCULUS III (4)
*(GT-MA1)

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.

60 Contact Hours. Prerequisite: MAT 202 with a grade of "C" or better or equivalent. Students may substitute MAT 204.

NOTE: This course is available via CCCOnline

MAT 204 CALCULUS III WITH ENGINEERING APPLICATIONS (5)
*(GT-MA1)

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.

75 Contact Hours. Prerequisite: MAT 202 with a grade of "C" or better or equivalent.

MAT 255 LINEAR ALGEBRA (3)
*(GT-MA1)

Includes vector spaces, matrices, linear transformations, matrix representation, eigenvalues, and eigenvectors.

45 Contact Hours. Prerequisite: MAT 202 with a grade of "C" or better or equivalent.

MAT 265 DIFFERENTIAL EQUATIONS (3)
*(GT-MA1)

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.

45 Contact Hours. Prerequisite: MAT 202 with a grade of "C" or better.

MET   - Meteorology

MET 150 GENERAL METEOROLOGY (4)
*(GT-SC1)

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.

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.

60 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.

60 Contact Hours. Prerequisite: Basic keyboarding, knowledge of an operating system and at least one multimedia software application.

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.

60 Contact Hours. Prerequisite: Basic keyboarding, knowledge of an operating system and at least one multimedia software application.

MGD 106 CREATIVE & VISUAL THINKING (3)

Introduces the visual and oral skills necessary to analyze works art and design, articulate complex ideas, then present the solution cogently in 2-D and 3-D projects and presentation skill building. The underlying philosophy of what we see, how we see and what we do with it is the major concern of this class.

60 Contact Hours.

MGD 109 DESIGN AND COLOR (3)

Covers the design process and creative problem solving. Design and color theories, fundamentals, styles, stages area applied to workups, finished art and presentations. Emphasis will be on line, form, composition and continuity.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: 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 graphic design. Class discussions and independent projects supplement hands-on classroom work.

60 Contact Hours. Prerequisite: 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.

60 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.

60 Contact Hours. Note: 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.

60 Contact Hours. Prerequisite: Basic keyboarding, knowledge of an operating system and at least one multimedia software application.

MGD 123 BRYCE (3)

Exploits 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.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: Basic keyboarding and knowledge of an operating system.

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 media for line quality, as well as value and texture interpretation, are also covered.

60 Contact Hours.

MGD 141 WEB DESIGN I (3)

Introduces the fundamentals of HTML syntax using a simple text editor to create a web page. Web-safe colors and the use of graphic editors will be explored. Students study web aesthetics and intuitive interface design. The course emphasizes file organization and layout including tables and frames.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: 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.

60 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.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: Basic keyboarding, knowledge of an operating system and at least one multimedia software application.

MGD 164 DIGITAL VIDEO EDITING I (3)

Introduces to 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.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: 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.

60 Contact Hours. Prerequisite: MGD 152 and familiarity with basic multimedia software

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.

60 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.

60 Contact Hours. Prerequisite: MGD 111.

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.

60 Contact Hours. Prerequisite: MGD 112.

MGD 213 ELECTRONIC PREPRESS (3)

Explores in detail the electronic prepress process. Students examine steps for preparing a digital file for trapping, output considerations and proofing techniques. Creating effective electronic designs and efficient use of today's software programs are also covered.

60 Contact Hours. Prerequisite: MGD 103, MGD 113 or MGD 114. Corequisite: MGD 103, MGD 113 or MGD 114.

MGD 221 COMPUTER GRAPHICS I (3)

Introduces the process of generating computer design.

60 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.

60 Contact Hours. Prerequisite: MGD 221 or permission of instructor.

MGD 233 GRAPHIC DESIGN II (3)

Continues instruction in idea development for advanced graphic design.

60 Contact Hours. Prerequisite: MGD 133 or permission of instructor.

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.

60 Contact Hours. Prerequisite: MGD 141.

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.

60 Contact Hours. Prerequisite: MGD 143.

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.

60 Contact Hours. Prerequisite: MGD 153.

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.

60 Contact Hours. Prerequisite: Permission of instructor.

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.

60 Contact Hours. Prerequisite: MGD 253

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.

60 Contact Hours. Prerequisite: MGD 241

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.

60 Contact Hours. Prerequisite: Permission of instructor.

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.

60 Contact Hours. Prerequisite: MGD 161.

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.

60 Contact Hours. Prerequisite: MGD 164.

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. Prerequisite MGD 111 or instructor approval.

60 Contact Hours.

MGD 268 COMMERCIAL ART BUSINESS (2)

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.

30 Contact Hours. Prerequisite: None

MOT - Medical Office Technology

MOT 110 MEDICAL OFFICE ADMINISTRATION (4)

Introduces the administrative duties specifically used in medical offices.

60 Contact Hours. Corequisites: ENG 121 and HPR 178.

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.

45 Contact Hours. Corequisites: HPR 178 and CIS 118.

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. This course is a follow-on course from MOT 133. Students may take MOT 125,

MOT 133 and MOT 135 in any order, but all three courses must be completed to meet the Basic Medical Sciences requirement.

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.

45 Contact Hours. Prerequisite: HPR 178 with a grade of "C" or better or permission of instructor. Corequisites: MOT 120 and HPR 137.

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.

60 Contact Hours. Corequisites: ENG 121 and HPR 178.

MOT 133 BASIC MEDICAL SCIENCES II   (3)

Teaches the anatomy and physiology, pathophysiology and drug therapy of the cardiovascular, respiratory and dermatology systems. This course is a follow-on course from MOT 123. Students may take MOT 125, MOT 133 and MOT 135 in any order, but all three courses must be completed to meet the Basic Medical Sciences requirement.

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, MOT 133 and MOT 135 in any order, but all three courses must be completed to meet the Basic Medical Sciences requirement.

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/OSHA regulations, medical asepsis, procedural gloving, patient gowning, positioning and measurement of vital signs.

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.

75 Contact Hours. Prerequisites: BIO 106, HPR 106, HPR 178, MOT 136 and PSY 101, all with a grade of C or better. Corequisites: HPR 137, MOT 140, MOT 150, and MOT 182 or MOT 183.

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.

90 Contact Hours. Prerequisites: BIO 106, HPR 106, HPR 178, MOT 136 and PSY 101. Corequisites: HPR 137, MOT 138, MOT 150 and MOT 182 or MOT 183.

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.

90 Contact Hours. Prerequisites: BIO 106, CIS 135, ENG 121, HPR 106, HPR 178 and MOT 132. Corequisites: HPR 137, MOT 150 and MOT 180.

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.

53 Contact Hours (30 lecture hours, 23 lab hours). Prerequisites: BIO 106, HPR 106 and HPR 178. Within two academic years prior to course enrollment, must attain math Accuplacer scores or grade of "C or better in MAT 099. Corequisite: HPR 137.

See the list of Specialized Medical Office Technology Courses on the first page of this Course Offerings section.

MOT 180 MEDICAL TRANSCRIPTION INTERNSHIP (3)

Provides supervised placement in a contracted facility for guided experience in the application of knowledge and skills acquired in the classroom.

105 Contact Hours (15 lecture hours, 90 lab hours). Prerequisite: Completion of Medical Transcriptionist coursework with a grade of "C" or better in each course.

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.

105 Contact Hours (15 lecture hours, 90 lab hours). Prerequisite: Concurrent enrollment in last semester of, or completion of Medical Receptionist or Medical Administrative Assistant coursework with a grade of "C" or better in each course.

MOT 182 CLINICAL INTERNSHIP (3)

Provides supervised placement in a contracted facility for guided experience in the applications of knowledge and skills acquired in the classroom. Student must have permission by program coordinator to begin internship.

105 Contact Hours (15 lecture hours, 90 lab hours). Prerequisites: Concurrent enrollment in last semester of, or completion of Clinical Office Assistant coursework with a grade of "C" or better in each course and current CPR and first-Aid certificates.

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 program coordinator to begin internship.

195 Contact Hours (15 lecture hours, 180 lab hours). Prerequisites: Concurrent enrollment in last semester of, or completion of Medical Assistant coursework with a grade of "C" or better in each course and current CPR and first Aid certificates.

MOT 184 BILLING SPECIALIST INTERNSHIP (3-4)

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. Positions are non-paid. Student must have permission by program coordinator to begin internship.

150 Contact Hours (15 lecture hours, 135 lab hours). Prerequisite: concurrent enrollment in last semester or completion of Billing Specialist course work with a grade of "C"

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.

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.

45 Contact Hours.

MTE 120 MANUFACTURING PROCESSES (3)

Provides the student an overview of the different methods, tools and machines that are used to manufacture industrial and consumer products.

45 Contact Hours.

MTE 210 NETWORKS AND CONTROL SYSTEMS (3)

Covers application and maintenance of machine control systems and computer networks. Concepts covered include control system operation, CIM, basic programming, network design, direct and distributed NC, client server paradigm, PLC's, PC-based control, LAN technologies, and network applications as elements of machine control systems. Students learn how to setup and troubleshoot machine control systems.

45 Contact Hours. Prerequisite: MTE 101.

MTE 220 MANUFACTURING BUSINESS AND ECONOMICS (3)

Covers basic macroeconomic concepts, the role of manufacturing in advanced economics, and the role of product development and manufacturing in a modern company. Students learn how to read and understand a complete set of financial statements, application of activity-based costing to determine core competencies and quotation preparation, marketing basics, e-business basics, and entrepreneurism basics. Students learn the differences between Original Equipment Manufacturers (OEM) and Contract Electronics Manufacturers (CEM's).

45 Contact Hours. Prerequisite: MTE 110.

MTE 230 DESIGN FOR MANUFACTURABILITY (3)

Provides students with an understanding on how to design a product for test, assembly, service, rebuild/reuse/recycle, postponement and several other product attributes. The student learns the role and development of design specifications, the importance and benefits of DFM, the design rules and their application, the design/manufacturing integration, the concept of designed-in quality, the role of design tolerances, the need for standard part use and the application and importance of concurrent engineering practices. In addition, the student learns the application of tools CAD, CAM, CAB, PDMS and CIM in product development.

45 Contact Hours. Prerequisite: MTE 110.

MTE 235 EFFECTIVE PRODUCT DESIGN (3)

Prepares students to participate as effective members on a product development team. Students learn the following concepts: customer expectations, time-based competition, the trade-off between development time, cost, and performance. Students learn how technologies are applied in the product development process. Students learn the roles of manufacturing and manufacturing engineering on a product development team.

45 Contact Hours. Prerequisite: MTE 220.

MTE 244 LEAN MANUFACTURING PRACTICES AND PROCESSES (3)

Provides a study of the Toyota Production Systems (TPS), also known as Lean Manufacturing, Just-in-Time (JIT) Demand flow, or Build-to-Order. The course covers the build-to-forecast batch-process method and compares it with TPS. The students study and develop in the lab the following TPS concepts/methods: customer expectations, seven fundamental wastes, plan-do-check-act cycle, kanban system and kanban types, material flow, group technology, manufacturing cells, point-of-use storage and support, and setup/changeover time reduction. This course also covers application of the following problem solving tools: flowchart, cause-and-effect diagram, check sheet, pareto chart, root cause analysis, statistical process control. Students investigate the basics of high-mix, low-volume manufacturing.

45 Contact Hours. Prerequisites: MTE 110 or permission of instructor.

See the list of Specialized Manufacturing Technology Courses on the first page of this Course Offerings section.

MTE 280 INTERNSHIP: MANUFACTURING (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.

90 Contact Hours. Prerequisite: Permission of instructor.

MUS - Music

MUS 100 FUNDAMENTALS OF MUSIC THEORY (3)

Designed to help beginning music student, or those students with a limited background in music theory, study the basic elements of music, including notation, rhythm, scales, key signatures, intervals and chords.

45 Contact Hours.

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.

45 Contact Hours. Prerequisite: MUS 100 or permission of instructor.

MUS 110 MUSIC THEORY I (3)

Presents music fundamentals, diatonic four-part harmony, analysis, ear training, and keyboard harmony.

45 Contact Hours. Prerequisite: MUS 100 . Corequisite: MUS 112.

MUS 111 MUSIC THEORY II (3)

Presents chromatic four-part harmony, analysis, ear training, and keyboard harmony.

45 Contact Hours. Prerequisites: MUS 110 and MUS 112. Corequisite: MUS 113.

MUS 112 EAR TRAINING/SIGHT-SINGING I LAB (1)

Presents exercises in sight-singing with melodic and rhythmic dictation.

15 Contact Hours. Prerequisite: MUS 100   Corequisite: MUS 110.

MUS 113 EAR TRAINING/SIGHT-SINGING II LAB (1)

Presents exercises in sight-singing with melodic and rhythmic dictation.

15 Contact Hours. Prerequisite: MUS 112 or equivalent. Corequisite: MUS 111.

MUS 120 MUSIC APPRECIATION (3)

*(GT-AH1)

Covers the basic materials of music, musical forms, media, genres and musical periods. Emphasizes the development of tools for intelligent listening and appreciation.

45 Contact Hours.

MUS 121 MUSIC HISTORY I (3)

*(GT-AH1)

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.

45 Contact Hours.

MUS 122 MUSIC HISTORY II (3)

*(GT-AH1)

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.

45 Contact Hours.

MUS 123 SURVEY OF WORLD MUSIC (3)

*(GT-AH1)

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.

45 Contact Hours.

MUS 125 HISTORY OF JAZZ MUSIC (3)

*(GT-AH1)

Provides an overview of the history of jazz in America, and to provide basic listening skills for the understanding and appreciation of jazz music.

45 Contact Hours.

MUS 126 HISTORY OF ROCK AND POP (3)

Provides a survey of the history and literature of American Popular Music from 1600 to the present. Through the study of the many ethnic influences that contribute to the diverse musical landscape of American Popular Music, the students acquire an appreciation of this rich musical heritage. These musical styles have evolved out of the diversity in America, and are performed and enjoyed throughout the world.

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.

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.

30 Contact Hours. Prerequisite: MUS 131

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.

8-15 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.

8-15 Contact Hours. Prerequisite: MUS 141

MUS 151 ENSEMBLE I (CHAMBER MUSIC, ORCHESTRA, CHAMBER CHOIR, JAZZ COMBO, OR VOCAL JAZZ)

Rehearses and performs various types of musical literature.

38 Contact Hours.

MUS 152 ENSEMBLE II (CHAMBER MUSIC, ORCHESTRA, CHAMBER CHOIR, JAZZ COMBO, OR VOCAL JAZZ)) (1)

Rehearses and performs various types of musical literature.

38 Contact Hours. Prerequisite: MUS 151

MUS 161 MUSIC TECHNOLOGY I (3)

Considers in-depth music engraving applications through course projects designed to demonstrate engraving skills in a variety of score styles, arranging, part extraction, arranging, and scanning techniques. Project-oriented course covers current music notation/ engraving software.

45 Contact Hours.

MUS 165 MIDI I (2)

Project-oriented course covers the uses of computers in the music profession. Considers the language of MIDI, computer skills necessary to learn music software applications, and the process of design and set-up of a music technology workstation. Course projects provide instruction in basic computer skills, music sequencing and notation software skills, the language of MIDI, and operation of synthesizers.

30 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.

30 Contact Hours.

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.

45 Contact Hours. Prerequisite: MUS 111 and MUS 113. Corequisite: MUS 112.

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.

45 Contact Hours. Prerequisite: MUS 210. Corequisite: MUS 213.

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.

15 Contact Hours. Prerequisites: MUS 111 and MUS 113 or permission of instructor. Corequisite: MUS 210.

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.

15 Contact Hours. Prerequisites: MUS 210 and MUS 212 or permission of instructor. Corequisite: MUS 211.

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.

8-15 Contact Hours. Prerequisite: Permission of instructor.

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.

8-15 Contact Hours. Prerequisite: Permission of instructor.

MUS 261 AUDIO PRODUCTION I (3)

Designed to give music students, as well as those with a strong interest in music and computer technology, a well-structured and basic 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.

45 Contact Hours. Prerequisite: MUS 161 or permission of instructor.

NRE - Natural Resources

NRE 100 FOUNDATIONS OF FORESTRY (3)

Presents the principles of forest science, dendrology, forest fire behavior, and silviculture principles.
53 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.
60 Contact Hours.

NRE 121 INTRODUCTION TO HYDROLOGY (3)

Introduces the movement of ground and surface water. Basic flow equations and graphs are used.
53 Contact Hours.

NRE 200 TROPICAL ECOLOGY: FIELD STUDY (3)

Studies the importance of tropical forests in local, regional and global environments. Students travel to different types of eco-systems, study the biotic organisms, complex interactions and ways to protect these valuable habitats.
90 Contact Hours. Prerequisite: BIO 222 or permission of instructor.

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.
53 Contact Hours.

NRE 215 FIRE ECOLOGY (3)

Allows students to study the ecological effects of fire. Current information and field experience will be emphasized.
53 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 wild life management, law enforcement, and forensics in this field.
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.
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.
53 Contact Hours.

See the list of Specialized Natural Resources Courses on the first page of this Course Offerings section.

NRE 275 ENVIRONMENTAL EDUCATION (3)

Provides students with a vehicle to pursue in-depth exploration of special topics of interest.
45 Contact Hours.

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.
66 Contact Hours. Prerequisite ENG 060 and REA 060 Corequisite: NUA 170

NUA 170 NURSE AIDE CLINICAL EXPERIENCE (1)

Applies knowledge gained from NUA 101 in a clinical setting.
24 Contact Hours. Prerequisite: NUA 101 and Immunizations to meet current O.S.H.A. guidelines; (current TB test) Corequisite: NUA 101. A background check is also required.

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.
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.
60 contact hours (60 lecture hours).   Prerequisites: Completion of preceding nursing coursework with a grade of C or better.

NUR 103 HEALTH ASSESSMENT FOR THE PN (1)

Provides a foundation in assessment and related therapeutic communication and teaching skills within the legal role of the Practical Nurse. 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.
15 contact hours (15 lecture hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

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

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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.

75 contact hours (75 lecture hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 105 PN ARTS AND SKILLS (6.5)

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 CNA program.)

120 contact hours (75 lecture hours, 45 lab hours) Prerequisites: Completion of preceding nursing coursework with a grade of C or better.

NUR 106 MEDICAL SURGICAL NURSING CONCEPTS (9)

Introduces the student to the role of the nurse in assessing and meeting the medical and surgical nursing needs of adults across the life span in various health care settings. The student learns nursing concepts to assist the patient in achieving optimal functioning. Knowledge from foundational nursing, the sciences, pharmacology, and nutrition along with the continued integration of mental health and cultural concepts provides foundations for nursing care planning for medical and surgical clients.

217.5 Contact Hours.(52.5 lecture hours, 15 lab hours and 150 clinical hours).

NUR 109 FUNDAMENTALS OF NURSING (8)

Introduces theories and skills basic to the role of the nurse as provider of care, manager of care and member of the nursing profession. Emphasis is placed on introduction to critical thinking and the nursing process. Students will demonstrate a beginning level of competence in providing therapeutic nursing care for clients with common health alterations across the health continuum.

210 Contact Hours. (30 lecture hours, 90 lab hours and 90 clinical hours).

NUR 110 PHARMACOLOGY 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.

45 contact hours(45 lecture hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 111 SOCIALIZATION 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.

15 contact hours (15 lecture hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 112 BASICS OF PHARMACOLOGY (2)

Utilizes nursing process to introduce the basic concepts of pharmacology related to the actions, therapeutic and adverse effects, interactions of drugs, drug classification, and the basic pharmacology of commonly used medications. Emphasis is placed on therapeutic interventions and client education. Learners will apply knowledge gained in selected clinical settings situations in caring for a diversity of clients across the lifespan health illness continuum.

30 Contact Hours (30 lecture hours).

NUR 113 BASIC CONCEPTS OF OB 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.

30 contact hours (30 lecture hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 114 BASIC CONCEPTS OF PEDS 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.

30 contact hours (30 lecture hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 115 BASIC CONCEPTS OF MENTAL HEALTH (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.

15 contact hours (15 lecture hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 116 BASIC CONCEPTS OF GERI 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.

15 contact hours (15 lecture hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 131 CLINICAL I APPL OF ARTS & SKILLS (4.5)

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.

135 contact hours (135 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 132 CLINICAL II APPL OF ADULT HEALTH (3)

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.

90 contact hours (90 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 133 CLINICAL III APPL MATERNAL CHILD (1.5)

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.

45 contact hours (45 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 134 CLINICAL IV ADV APPL ADULT HEALTH (4.5)

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.

135 contact hours (135 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 150 NURSING CARE OF OBSTETRIC AND PEDIATRIC CLIENTS (7)

Provides a family centered approach to professional nursing practice of the childbearing family and children across the health continuum. Emphasis is placed on the care of the perinatal client and children from birth through adolescence. The impact of psychosocial and cultural values and practices are explored. Legal and ethical accountability are integrated throughout the course.

165 Contact Hours. (45 lecture hours, 30 lab hours and 90 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 169 TRANSITION INTO PRACTICAL NURSING (5)

Provides the student with a transition into the role of the practical nurse. Emphasis will be placed on clinical practice, communication, nursing process, ethical/legal Issues and leadership skills. The student will practice the role of the practical nurse in the required clinical experience.

120 contact hours (30 lecture hours, 90 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of "C" or better.

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.

30 Contact Hours per credit.   Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 189 TRANSITION FROM LPN TO ADN (4)

Focuses on assisting the LPN to transition into a new role as an Associate Degree Nursing Student. 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.

90 contact hours (30 lecture hours, 30 lab hours, 30 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 201 IV THERAPY FOR LPNs (5)

Provides LPNs with an opportunity to expand their nursing roles by learning appropriate procedures for intravenous 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.

90 Contact Hours (50 lecture hours, 17 lab hours, 23 clinical hours).

NUR 206 ADVANCED CONCEPTS OF M/S NURSING I (8)

Focuses on the role of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the nursing needs of adults across the life span. Utilizing the nursing process, the student is expected to integrate previous learning to assist the patient and family in achieving optimal functioning in various health care settings.

195 Contact Hours (45 lecture hours, 15 lab hours, 135 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of C.

NUR 211 NURSING CARE OF PSYCHIATRIC CLIENTS (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 clinical conditions/disorders.

105 Contact Hours (15 lecture hours, 30 lab hours, 60 clinical hours).Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 212 ADVANCED CONCEPTS OF PHARMACOLOGY (2)

Builds upon the concepts introduced in NUR 112 Pharmacology I regarding the safe administration of medications to clients across the health continuum. Utilizing the nursing process the student demonstrates understanding of the role of the nurse as provider of care, manager of care, and member of the profession. Emphasis is placed upon the therapeutic use of medications in the nursing care of individuals with complex health needs. The student is introduced to the calculation of complex intravenous drip rates.

30 Contact Hours. Prerequisites: Completion of preceding nursing coursework with a grade of C or better.

NUR 216 ADVANCED CONCEPTS OF M/S NURSING II (6)

Continues to focus on the role of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the complex medical and surgical health care needs of adult clients. Utilizing the nursing process, the student is expected to integrate previous learning to assist the patient and family in achieving optimal functioning in various complex health care situations and settings.

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150 Contact Hours (30 lecture hours, 120 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

NUR 230 LEADERSHIP, MANAGEMENT AND TRENDS (5)

Introduces students to current trends in leadership and management concepts affecting the health care continuum and the practice of nursing. The student assumes the role of provider, manager of care and member of the discipline at the entry level into professional nursing. There is a practicum for application which may occur across the healthcare continuum, as the student manages groups of clients and health care personnel. The course will facilitate transition from student to the role of the graduate nurse.

127.5 Contact Hours. (22.5 lecture hours, 105 clinical hours). Prerequisites: Completion of preceding nursing course work with a grade of C or better.

OSH – Occupational Safety Technician

OSH 127 10-HR CONSTRUCTION INDUSTRY STANDARDS (1)

Provides a 10-Hour OSHA certification course for the construction industry and participants will review the current OSHA standards contained in 29 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.

22.5 Contact Hours. Prerequisite: None.

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.

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.

45 Contact Hours.

PAR 117 FAMILY LAW (3)

Emphasizes domestic law, common property, dissolutions, adoptions, legal separation, and other family law issues.

45 Contact Hours.

PAR 118 CONTRACTS (3)

Examines the basic principles of contract law.

45 Contact Hours.

PAR 125 PROPERTY LAW (3)

Focuses on real estate law, ownership, sale, leasing, financing and government regulation of land.

45 Contact Hours.

PAR 126 ADMINISTRATIVE LAW (3)

Introduces administrative and regulatory agencies, their jurisdiction, rule-making and decision-making processes.

45 Contact Hours. Prerequisite: PAR 115.

PAR 127 LEGAL ETHICS (3)

Explores the parameters of professional responsibilities and value systems for paralegals and related occupations.

45 Contact Hours.

PAR 202 EVIDENCE (3)

Introduces the student to State and Federal Rules of Evidence and application to the trial process.

45 Contact Hours. Prerequisite: PAR 115

PAR 203 CIVIL LITIGATION I (3)

Covers the beginning of the civil litigation process from perspectives of the paralegal, including jurisdiction, pleadings, interviewing, and investigation.

45 Contact Hours.

PAR 204 CIVIL LITIGATION II (3)

Covers the trial phase of the civil litigation process from the perspective of the paralegal, including discovery, trial management, jury instructions, exhibits, and post trial issues.

45 Contact Hours. Prerequisite: PAR 203.

PAR 205 CRIMINAL LAW (3)

Introduces basic concepts of criminal law and criminal procedure, including Colorado statutes and Rules of Procedure.

45 Contact Hours. Prerequisite: PAR 115

PAR 206 BUSINESS ORGANIZATIONS (3)

Focuses on the study of the major types of business organizations.

45 Contact Hours. Prerequisite: PAR 115

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.

45 Contact Hours. Prerequisite: PAR 115

PAR 209 CONSTITUTIONAL LAW (3)

Emphasizes the study of the powers of government as they are allocated and defined by the United States Constitution.

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.

45 Contact Hours. Prerequisite: PAR 115

PAR 212 LEGAL WRITING (3)

Enables the student to practice the content and conventions of legal writing.

45 Contact Hours. Prerequisite: ENG 121, PAR 115, PAR 211

PAR 215 ALTERNATIVE DISPUTE RESOLUTION (3)

Introduces the student to negotiating, mediation, arbitration and other forms of dispute resolution.

45 Contact Hours.

PAR 216 EMPLOYMENT LAW (3)

Provides an understanding of current legal issues in the area of employer/employee relationships.

45 Contact Hours. Prerequisite: PAR 115 or permission of instructor.

PAR 217 ENVIRONMENTAL LAW (3)

Covers state and federal laws concerning the environment, including chemical safety laws, workplace safety, and hazardous waste.
45 Contact Hours.

PAR 218 BANKRUPTCY LAW (3)

Focuses on the federal and state laws and procedures involving bankruptcy.
45 Contact Hours. Prerequisite: PAR 115 or permission of instructor.

PAR 225 INTERNATIONAL LAW (3)

Focuses on the business, political, and legal implications of relationships between countries.
45 Contact Hours. Prerequisite: PAR 115

PAR 227 IMMIGRATION LAW (3)

Provides an understanding of the United States Immigration Laws.
45 Contact Hours. Prerequisite: PAR 115

PAR 228 INTELLECTUAL PROPERTY (3)

Covers the federal and state laws regarding intellectual property.
45 Contact Hours.

PAR 229 BANKING LAW AND REGULATION (3)

Provides an overview of banking law and regulations.
45 Contact Hours. Prerequisite: PAR 115

PED   - Physical Education

PED 100 BEGINNING GOLF (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.
30 Contact Hours.

PED 102 VOLLEYBALL (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.
30 Contact Hours.

PED 105 BASKETBALL (1)

Introduces basketball and focuses on improving student skill level. Emphasizes teaching the student the elements of basketball rules, offensive and defensive footwork, shooting, passing, dribbling, rebounding, team play, and game strategies.
30 Contact Hours.

PED 106 TENNIS (1)

Introduces tennis and focuses on improving the skill level of the student. Emphasizes the elements of tennis including the rules of the game, groundstrokes, serving, the various shots, and singles and doubles play and strategies.
30 Contact Hours.

PED 108 BEGINNING SWIMMING (1)

Teaches the fundamentals of swimming including the front crawl, elementary backstroke, back crawl, and the fundamentals of treading water. Students may also be introduced to the breaststroke and sidestroke and the basics of turning at a wall. This course is for the non-swimmer or novice swimmer looking to improve aquatic skills.
30 Contact Hours.

PED 109 ADVANCED SWIMMING (1)

Builds on PED 108 and enables the student to coordinate and refine the major swimming strokes. Examines the butterfly stroke, open turns and surface dives. Students develop endurance swimming using the primary swimming strokes.
30 Contact Hours. Prerequisite: PED 108 or equivalent, or permission from instructor.

PED 112 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.
30 Contact Hours.

PED 114 WALKING AND JOGGING (1)

Enables the student to understand the values in walking and jogging. Safety precautions and emphasis on personal programs are emphasized.
30 Contact Hours.

PED 115 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.
30 Contact Hours.

PED 116 WEIGHT TRAINING (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.
30 Contact Hours.

PED 117 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.
30 Contact Hours.

PED 118 INDOOR STATIONARY GROUP CYCLING (1)

Focuses on improving cardiovascular fitness, burning calories and enhancing muscular endurance. Designed specifically to enhance aerobic work capacity and improve pedaling skills. Each exercise session is choreographed to music and includes

a complete workout with a warm-up, endurance and cool-down component.

30 Contact Hours.

PED 119 FITNESS CIRCUIT TRAINING (1)

Examines a number of different circuit training programs. Emphasizes the development of cardiovascular endurance, muscular strength and endurance, flexibility and a healthy body composition to meet individual needs.

30 Contact Hours.

PED 120 SWIM FITNESS (1)

Enables the student to perfect stroke mechanics to swim with more ease, efficiency, power, and smoothness over greater distances. This course may utilize the competitive strokes, starts, and turns, and provide the "whys" as well as the "hows" of swim fitness so students can plan training programs to meet their changing needs.

30 Contact Hours. Prerequisite: PED 109 or equivalent, or permission from instructor.

PED 121 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.

30 Contact Hours.

PED 124 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.

30 Contact Hours.

PED 125 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.

30 Contact Hours.

PED 126 WATER AEROBICS (1)

Offers water exercise to develop physical fitness. Includes instruction in a variety of water exercises and vigorous activities to develop cardiovascular and muscular endurance, flexibility and the promotion of body composition management.

30 Contact Hours.

PED 127 INTRODUCTION TO FLY-FISHING (1)

Enables the student to gain the knowledge and skill of the fine art of fly-fishing including the selection and use of appropriate equipment, fly-casting techniques, fly-fishing entomology, and guiding techniques. Includes several field trips to local fly-fishing areas.

15 Contact Hours.

PED 129 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 (PADI) certification.

30 Contact Hours. Prerequisite: PED 108 or equivalent

PED 131 NORDIC SKIING (1)

Provides the student with the fundamental skills of Nordic skiing. Emphasizes skiing technique, conditioning, safety, and equipment. The course incorporates classroom and activity sessions. Conditioning in the fitness center and trips to local ski areas are covered.

30 Contact Hours.

PED 132 SNOWSHOEING (1)

Emphasizes the basic skills, equipment, clothing and techniques of snowshoeing. It includes the objective dangers involved with winter recreation.

30 Contact Hours.

PED 136 ADVANCED WEIGHT TRAINING (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.

45 Contact Hours.

PED 143 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.

30 Contact Hours.

PED 145 PILATES MATWORK I (1)

Focuses on Pilates matwork to increase core strength, overall muscles tone and flexibility with focused and precise floor work techniques. A physical education class built upon the philosophies and exercises of Josef Pilates.

30 Contact Hours.

PED 146 MARTIAL ARTS (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.

30 Contact Hours.

PED 147 YOGA (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.

30 Contact Hours.

PED 150 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.
45 Contact Hours.

PED 151 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.
45 Contact Hours. Prerequisite: PED 150 or permission of instructor.

PED 153 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.
30 Contact Hours.

PED 154 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.
45 Contact Hours.

PED 155 OUTDOOR EXPEDITION (2)

Consists of a group expedition covering seven to ten days incorporating hiking, backpacking, climbing, or paddling in remote North American regions. Examines the rationale for organizing and conducting wilderness trips.
30 Contact Hours.

PED 157 BASIC MOUNTAINEERING (3)

Provides students with a combination of skills and practical experience in the fundamentals of mountaineering. Emphasizes basic climbing skills and techniques, equipment usage, safety systems, mountain travel and awareness, problem solving and decision-making, high altitude climate and weather, wilderness ethics, and physical fitness.
75 Contact Hours. Prerequisite: PED 150

PED 162 MAP & COMPASS FOR THE OUTDOOR PERSON (3)

Covers the reading of highway, forest service, and topographical maps including symbols, legends, border information, and contour lines. Explores the use of magnetic compasses in an outdoor environment and functions that plot a course on maps. Supplemental navigation skills are included.
45 Contact Hours.

PED 163 ORIENTEERING AND ROUTE FINDING (3)

Combines the topics of using different topographical maps and compasses in order to safely plan a route in the wilderness with Orienteering (organized competitive cross-country land navigation). Orienteering rules, symbols, clues, and clubs are covered. field trips may include student participation in a scheduled Orienteering meet.
45 Contact Hours.

PED 164 STRETCH 'N RELAX (1)

Designed for students who want to increase flexibility and improve muscle tone through proper exercise techniques using mat work. Body alignment, breathing, and work on the abdominals, hips and thighs will be emphasized.
30 Contact Hours.

PED 165 WILDERNESS SURVIVAL SKILLS (3)

Emphasizes the physiological, psychological and practical principles of survival. Survival equipment, wilderness improvising techniques, and wilderness dangers are included.
75 Contact Hours.

PED 215 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).
30 Contact Hours. Prerequisite: PED 129, or equivalent

PER - Physical Education Recreation

PER 113 INTRODUCTION TO PHYSICAL EXERCISE 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.
30 Contact Hours.

PER 150 WATER SAFETY INSTRUCTOR (3)

Prepares students to become certified by the American Red Cross (ARC) as a Water Safety Instructor (WSI). Enables students to develop skills for teaching infant and preschool aquatics, Levels 1-7 in the Learn to Swim Program, Community Water Safety, and Water Safety Instructor Aide. Focuses on teaching people with special needs and planning and conducting safe and effective swim lessons.
60 Contact Hours. Prerequisite: 17+ years old. Pass the pre-course ARC written test and skills test.

PER 151 LIFEGUARD TRAINING (2)

Provides the necessary minimum knowledge and skills training for a person to qualify as a non-surf lifeguard. Prepares lifeguard candidates to recognize emergencies, respond quickly and effectively to emergencies and prevent drowning and other incidents. The course also teaches other skills and individual needs to be a professional lifeguard.
45 Contact Hours. Prerequisite: PED 109 or equivalent

PER 152 AVALANCHE SAFETY (2)

Emphasizes the latest information available about the study of avalanches, snow science, rescue equipment, and rescue techniques.   Provides students with the knowledge and skills necessary to help instill good judgment and sound skills when making day-to-day travel decisions in the winter environment. This course fulfills the National Ski Patrol's Basic (Level 1) Avalanche course requirements.
30 Contact Hours.

PER 153 WHITEWATER RAFTING GUIDE (2)

Meets the requirements of Colorado Statute 33-32-105.5 which provides for the minimum qualifications of professional whitewater rafting guides. The classroom portion includes a

review of the logistics, equipment, clothing, safety considerations, risk management, outdoor ethics, river reading fundamentals, and leadership skills. The remainder of the course will be spent with a licensed outfitter practicing all related and required skills while on the river.
30 Contact Hours.

PER 168 OUTDOOR EQUIPMENT (1)

Acquaints and familiarizes the student with wilderness equipment, programs and facilities. Includes field trips to local outdoor industry facilities.
15 Contact Hours.

PER 200 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.
45 Contact Hours.

PER 231 INTRODUCTION TO SPORT AND EXERCISE INJURY MANAGEMENT (2)

Offers instruction in identification and management of basic sports injuries. Enables the student to practice taping techniques, injury care and basic modes of rehabilitation following injury.
45 Contact Hours.

PER 232 CARE AND PREVENTION OF ATHLETIC INJURIES (3)

Focuses on techniques in prevention, care and basic rehabilitation of athletic injury.
53 Contact Hours.

PER 252 PRINCIPLES OF OUTDOOR RECREATION (3)

Includes lecture and practical outdoor experience relating to problems and trends in outdoor recreation.
60 Contact Hours.

PHI   - Philosophy

PHI 111 INTRODUCTION TO PHILOSOPHY (3)
*(GT-AH3)

Introduces significant human questions and emphasizes understanding the meaning and methods of philosophy. Includes human condition, knowledge, freedom, history, ethics, the future, and religion.
45 Contact Hours. Prerequisites: College level reading and writing skills.

PHI 112 ETHICS (3)
*(GT-AH3)

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.
45 Contact Hours. Prerequisites: College level reading and writing skills.

PHI 113 LOGIC (3)
*(GT-AH3)

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.
45 Contact Hours. Prerequisites: College level reading and writing skills.

PHI 114 COMPARATIVE RELIGIONS (3)
*(GT-AH3)

Introduces students to the similarities and differences among concepts predominant in the major world religions, comparing sociological, philosophical, and phenomenological similarities between major world faiths.
45 Contact Hours. Prerequisite: College level reading and writing skills.

PHI 115 WORLD RELIGIONS - WEST (3)

Introduces the student to the common and different concepts predominant in the major world religions. Includes sociological, political, psychological, and philosophical aspects of a variety of belief systems. Focuses on the concept of religion as a cultural system, and a way that people make sense of a complex world. Particular emphasis is placed on how myths, legends, and folk tales reveal religious concerns.
45 Contact Hours.

PHI 116 WORLD RELIGIONS - EAST (3)

Emphasizes the diversity and richness of Eastern Religions within a cross-cultural context. Concepts such as fate, reincarnation, enlightenment and morality are analyzed.
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.
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.
45 Contact Hours.

PHI 205 BUSINESS ETHICS (3)

Analyzes of ethical behavior for business. 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.
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..
45 Contact Hours.

PHI 214 PHILOSOPHY OF RELIGION (3)
*(GT-AH3)

Focuses on the critical examination of the fundamental concepts, ideas, and implications of religion. Specific topics will include: 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.

45 Contact Hours.

PHI 218 ENVIRONMENTAL ETHICS (3)

*(GT-AH3)

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.

45 Contact Hours.

PHO - Photography

See ART Subject Area, for Photography-Related Courses

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.

45 Contact Hours.

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.

30 Contact Hours.

PHT 113 PHARMACY CALCULATIONS AND TERMINOLOGY (1)

Provides the pharmacy technician student with a math preview necessary for pharmaceutical calculations and reviews necessary pharmaceutical terminology.

15 Contact Hours.

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.

23 Contact Hours.

PHT 115 PHARMACOLOGY OF THE GI, RENAL, REPRODUCTIVE, IMMUNE, DERMATOLOGIC SYSTEMS (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.

45 Contact Hours.

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.

68 Contact Hours.

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.

15 Contact Hours.

PHT 118 PHARMACOLOGY OF THE NERVOUS, ENDOCRINE, MUSCULOSKELETAL SYSTEMS (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.

45 Contact Hours. Prerequisite: PHT 115.

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.

68 Contact Hours.

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.

15 Contact Hours.

PHT 170 PHARMACY CLINICAL: HOSPITAL (4)

Provides students with hands-on experience in an inpatient hospital pharmacy setting within the State of Colorado. Students must complete all didactic coursework prior to enrolling for this course. The course involves a minimum of 160 hours including 8 hours of seminar class time and 152 hours of on-the-job work experience. Each student is required to work under the supervision of a licensed pharmacist (i.e. preceptor) who may, in turn, delegate some supervisory and/or training responsibilities to another licensed pharmacist or certified pharmacy technician. During their work time at their hospital pharmacy site, students are expected to participate in the pharmacy practice activities delineated in the Clinical Site Manual provided each student and each preceptor. Such activities include, but are not limited to, dispensing, compounding, inventory handling and control, drug distribution, and the preparation of intravenous (IV) admixture products, chemotherapy products and total parenteral nutrition (TPN) products. Students are also expected to complete daily and weekly reports of their work activities and are required to evaluate both their work site and their preceptor at the conclusion of their clinical rotation. Similarly, each preceptor is asked to complete an evaluation of, and provide a grade for, each student at the completion of the student's rotation. The course instructor is also required to evaluate each student after completing a visit to the student's work site and discussing the student's performance with both the student and their preceptor.

150 Contact Hours. Prerequisites: PHT 111, PHT 113 and PHT 116.

PHT 171 PHARMACY CLINICAL: COMMUNITY (4)

Provides students with hands-on experience in a community pharmacy setting within the State of Colorado. Students must complete all didactic coursework prior to enrolling for this course. The course involves a minimum of 160 hours including 8 hours of seminar class time and 152 hours of on-the-job work experience. Each student is required to work under the supervision of a licensed pharmacist (i.e. preceptor) who may, in turn, delegate some supervisory and/or training responsibilities to another licensed pharmacist or certified pharmacy technician. During their work time at their community pharmacy site, students are expected to participate in the pharmacy practice activities delineated in the Clinical Site manual provided each student and each preceptor. Such activities include, but are not limited to, dispensing, compounding, inventory handling and control, drug distribution, processing of third party claims, maintenance of patient profiles and interaction and communication with patients. Students are also expected to complete daily and weekly reports of their work activities and are required to evaluate both their work site and their preceptor at the conclusion of their clinical rotation. Similarly, each preceptor is asked to complete an evaluation of, and provide a grade for, each student at the completion of the student's rotation. The course instructor is also required to evaluate each student after completing a visit to the student's work site and discussing the student's performance with both the student and their preceptor.

150 Contact Hours.

PHT 205 CERTIFICATION REVIEW (.5)

Prepares the student for the national Pharmacy Technician Certification Examination.

8 Contact Hours. Prerequisite: Completion of PHT certificate program or prior work experience as a pharmacy technician.

See the list of Specialized Pharmacy Technician Courses on the first page of this Course Offerings section.

PHY — Physics

PHY 105 CONCEPTUAL PHYSICS (4)

*(GT-SC1)

(Cannot be applied toward A.S. Degree)

Focuses on mechanics, heat, properties of matter, electricity and magnetism, light and modern physics. Incorporates laboratory experience.

75 Contact Hours (45 lecture hours and 30 lab hours). Prerequisite MAT 090 or 107 or 108.

PHY 111 PHYSICS: ALGEBRA-BASED I WITH LAB (5)

*(GT-SC1)

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 all of the health sciences and all other interested students. Students entering engineering or one of the advanced sciences should register for PHY 211.

90 Contact Hours (60 lecture hours, 30 lab hours). Prerequisite: MAT 121.

PHY 112 PHYSICS: ALGEBRA-BASED II WITH LAB (5)

*(GT-SC1)

Expands upon PHY 111 and covers sound waves, electric fields, electric circuits, magnetic fields, optics, and modern physics. Explores the concepts and theories presented in class through demonstrations and hands-on experiments.

90 Contact Hours (60 lecture hours, 30 lab hours). Prerequisite: PHY 111.

PHY 211 PHYSICS: CALCULUS-BASED I WITH LAB (5)

*(GT-SC1)

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 the demonstrations and the hands-on experiments. This first semester calculus-based physics course is recommended for students entering engineering or one of the advanced sciences.

105 Contact Hours (60 lecture hours, 45 lab hours). Prerequisite: MAT 201.

PHY 212 PHYSICS: CALCULUS-BASED II WITH LAB (5)

*(GT-SC1)

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.

105 Contact Hours (60 lecture hours, 45 lab hours). Prerequisite: PHY 211.

POS - Political Science

POS 105 INTRODUCTION TO POLITICAL SCIENCE (3)
*(GT-SS1)

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.
45 Contact Hours.

POS 111 AMERICAN GOVERNMENT (3)
*(GT-SS1)

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.
45 Contact Hours.

POS 125 AMERICAN STATE AND LOCAL GOVERNMENT (3)
*(GT-SS1)

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.
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.
45 Contact Hours.

POS 205 INTERNATIONAL RELATIONS (3)
*(GT-SS1)

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.
45 Contact Hours.

POS 211 PUBLIC FINANCE (3)

An analysis of the effects of taxation, government expenditures, fiscal policy, and public debt on resource allocation and income distribution. Topics include taxation, pricing of public services, intergovernmental fiscal relations, and other financial issues in public finance.
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.
45 Contact Hours.

POS 221 COMMUNITY PLANNING AND DEVELOPMENT (3)

Identifies and analyzes major issues facing governmental entities, such as growth, economic development, education, public security and safety, utilities, recreation, etc., with examination of how these can be addressed.
45 Contact Hours.

POS 225 COMPARATIVE GOVERNMENT (3)
*(GT-SS1)

Focuses on a comparison of the basic features of selected developed and developing countries. Topics include ideologies, political parties, interest groups, and governmental institutions.
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.
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.
68 Contact Hours.

PPT 210 STEAM TURBINES (3)

Explains various topics from steam turbine design, construction, and operation, including the tandem and cross-compound designs typically found in power stations to control and instrumentation systems. Other subjects covered include turbine startup, normal operations, procedures during abnormal and emergency conditions, and operator responsibilities.
68 Contact Hours.

PPT 215 POWER GENERATION (3)

Introduces the basic elements of generator design, protection, and operation. Students are introduced to the theoretical aspects of reactive power in power systems by analyzing the inductive and capacitive components of the system, with an emphasis on megavar loading as it is affected by the excitation system. The generator`s auxiliary systems, including hydrogen cooling systems, stator cooling systems, seal oil systems, and generator degassing procedures, are also introduced, and the function and types of exciters commonly found in power plants are examined.
68 Contact Hours.

PSY   - Psychology

PSY 100 PSYCHOLOGY OF WORKPLACE RELATIONSHIPS (3)

Focuses on interactions among people - their conflicts, cooperative efforts, and group relationships. Examines why beliefs, attitudes, and behaviors cause relationship problems in our personal lives and in work-related situations. Emphasizes the analysis of human behavior, the application of prevention strategies, and resolution of the behavior.
45 Contact Hours.

PSY 101 GENERAL PSYCHOLOGY I (3)

*(GT-SS3)

Focuses on the scientific study of behavior including motivation, emotion, physiological psychology, stress and coping, research methods, consciousness, sensation, perception, learning and memory.
45 Contact Hours.

PSY 102 GENERAL PSYCHOLOGY II (3)

*(GT-SS3)

Focuses on the scientific study of behavior including cognition, language, intelligence, psychological assessment, personality, abnormal psychology, therapy, life span development and social psychology.
45 Contact Hours.

PSY 116 STRESS MANAGEMENT (3)

Identifies the physiological, emotional and behavioral aspects of stress. Techniques of stress reduction and management are explored and applied, including nutrition, exercise, assertiveness, time management, and financial management. This course is not designed for transfer.
45 Contact Hours.

PSY 205 PSYCHOLOGY OF GENDER (3)

*(GT-SS3)

Examines gender comparisons in work, courtship, family life and sexual behavior throughout the lifespan.
45 Contact Hours.

PSY 217 HUMAN SEXUALITY (3)

*(GT-SS3)

Surveys physiological, psychological and psychosocial aspects of human sexuality. Topics include relationships, sexual identity, and sexual health.
45 Contact Hours.

PSY 226 SOCIAL PSYCHOLOGY (3)

*(GT-SS3)

Focuses on the behavior of humans in social settings including attitudes, aggression, conformity, cooperation and competition, prejudice and interpersonal attraction.
45 Contact Hours. Prerequisite: PSY 101 or PSY 102.

PSY 227 PSYCHOLOGY OF DEATH AND DYING (3)

*(GT-SS3)

Examines the philosophies of life and death emphasizing dying, death, mourning and the consideration of one's own death.
45 Contact Hours.

PSY 235 HUMAN GROWTH AND DEVELOPMENT (3)

*(GT-SS3)

Examines human development from conception through death emphasizing physical, cognitive, emotional, and psychosocial factors.
45 Contact Hours.

PSY 238 CHILD DEVELOPMENT (3)

*(GT-SS3)

Focuses on the growth and development of the individual from conception through childhood, emphasizing physical, cognitive, emotional, and psychosocial factors.
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.
45 Contact Hours.

PSY 249 ABNORMAL PSYCHOLOGY (3)

*(GT-SS3)

Examines abnormal behavior and its classifications, causes, treatment and prevention.
45 Contact Hours. Prerequisite: 3 credits of general psychology

PSY 257 PSYCHOLOGICAL ASPECTS OF ABUSE IN RELATIONSHIPS (2)

Focuses on psychosocial factors contributing to both abusive and victimization behaviors in a variety of relationships.
30 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.
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.
45 Contact Hours.

REA   - Reading

REA 030 BASIC READING SKILLS (2)

Focuses on strategies for word attack, vocabulary development, stages of reading and basic reading comprehension.
30 Contact Hours. Prerequisite: Appropriate assessment scores.

REA 060 FOUNDATIONS OF READING (3)

Focuses on strategies for vocabulary development, improved reading comprehension, and enrichment.
45 Contact Hours. Prerequisite: Appropriate assessment scores or grade of "C" or better in REA 030.

REA 090 COLLEGE PREPARATORY READING (3)

Enables the student to apply strategies for improving comprehension, developing vocabulary, and increasing rate for reading college textbooks.

45 Contact Hours. Prerequisite: Appropriate assessment scores or grade of "C" or better in REA 060.

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.

30 Contact Hours. Prerequisite: Appropriate assessment scores.

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.

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.

45 Contact Hours. Prerequisite: RUS 101 or permission of instructor.

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.

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.

75 Contact Hours. Prerequisite: RUS 111 or permission of instructor.

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.

45 Contact Hours. Prerequisite: RUS 102 or permission of instructor.

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.

45 Contact Hours. Prerequisite: RUS 201

RUS 211 RUSSIAN LANGUAGE III (3)

*(GT-AH4)

Continues Russian Language I and II in the development of increased functional proficiency in listening, speaking, reading, and writing the Russian language.

45 Contact Hours. Prerequisite: RUS 112

RUS 212 RUSSIAN LANGUAGE IV (3)

*(GT-AH4)

Continues Russian Language I, II and III in the development of increased functional proficiency in listening, speaking, reading, and writing the Russian language.

45 Contact Hours. Prerequisite: RUS 211

SCI - Science

SCI 155 INTEGRATED SCIENCE I (4)

*(GT-SC1)

(Cannot be applied toward A.S. Degree)

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.

75 Contact Hours (45 lecture hours, 30 lab hours).

SCI 156 INTEGRATED SCIENCE II (4)

*(GT-SC1)

(Cannot be applied toward A.S. Degree)

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.

75 Contact Hours (45 lecture hours, 30 lab hours).

SOC - Sociology

SOC 101 INTRODUCTION TO SOCIOLOGY I (3)

*(GT-SS3)

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.

45 Contact Hours.

SOC 102 INTRODUCTION TO SOCIOLOGY II (3)

*(GT-SS3)

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.

45 Contact Hours.

SOC 205 SOCIOLOGY OF FAMILY DYNAMICS (3)

*(GT-SS3)

Develops an understanding of marriage, family and kinship. It 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.

45 Contact Hours.

SOC 207 ENVIRONMENTAL SOCIOLOGY (3)

*(GT-SS3)

Examination of 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.

45 Contact Hours.

SOC 208   RESTORATIVE JUSTICE I (3)

Provides an introduction to the principles and practices of Restorative Justice, an increasingly popular 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.

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.

45 Contact Hours.

SOC 215 CONTEMPORARY SOCIAL PROBLEMS (3)

*(GT-SS3)

Explores current social issues that result in societal problems. It focuses on such issues as civil liberties, gender discrimination, substance abuse, crime, poverty, and social change.

45 Contact Hours.

SOC 216 SOCIOLOGY OF GENDER (3)

*(GT-SS3)

Gives students 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.

45 Contact Hours.

SOC 218   SOCIOLOGY OF DIVERSITY (3)

*(GT-SS3)

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.

45 Contact Hours.

SOC 220 SOCIOLOGY OF RELIGION (3)

*(GT-SS3)

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.

45 Contact Hours.

SOC 231 SOCIOLOGY OF DEVIANT BEHAVIOR (3)

*(GT-SS3)

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.

45 Contact Hours.

SOC 237 SOCIOLOGY OF DEATH AND DYING (3)

*(GT-SS3)

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. We will examine the professions associated with death and dying, such as hospice, funeral and crematory institutions, and medical care.

45 Contact Hours.

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.

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.

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.

45 Contact Hours. Prerequisite: SPA 101.

SPA 111 SPANISH LANGUAGE I (5)

Deals with the development of functional proficiency in listening, speaking, reading, and writing the Spanish language.

75 Contact Hours.

SPA 112 SPANISH LANGUAGE II (5)

Continues Spanish Language I in the development of functional proficiency in listening, speaking, reading, and writing the Spanish language.

75 Contact Hours. Prerequisite: SPA 111.

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.

75 Contact Hours. Prerequisite: Two years of Spanish in high school within the past 2 years with a grade of B or better.

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.
45 Contact Hours.

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.
45 Contact Hours. Prerequisite: SPA 102.

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.
45 Contact Hours. Prerequisite: SPA 201.

SPA 211 SPANISH LANGUAGE III (3)

*(GT-AH4)

Continues Spanish Language I and II in the development of increased functional proficiency in listening, speaking, reading, and writing the Spanish language.
45 Contact Hours. Prerequisite: SPA 112.

SPA 212 SPANISH LANGUAGE IV (3)

*(GT-AH4)

Continues Spanish Language I, II and III in the development of increased functional proficiency in listening, speaking, reading, and writing the Spanish language.
45 Contact Hours. Prerequisite: SPA 211.

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.
45 Contact Hours. Prerequisite: SPA 115.

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.
45 Contact Hours. Prerequisite: SPA 212.

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.
45 Contact Hours. Prerequisite: SPA 212.

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.
45 Contact Hours. Prerequisite: SPA 212.

SPE   - Speech

See COM--Communications section for speech classes

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.
22.5 Contact Hours. Prerequisites: None, basic English, writing and math skills needed.   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.
22.5 Contact Hours.   Prerequisites: SVT 160, or instructor approval. 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.
22.5 Contact Hours.   Prerequisites: SVT 165, or instructor approval. Possible high course fees

TEC   - Technical

TEC 201 ENGINEERING MATERIALS (3)

Investigates the types, properties and behavior of state-of-the-art and advanced materials. Lectures include an introduction to the classifications, properties and behavior of ferrous and nonferrous metals, polymers (plastics), woods, ceramics, and advanced materials.
45 Contact Hours.

TEC 210 APPLIED STATIC/STRENGTH MATERIAL (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.
67.5 Contact Hours.

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.

45 Contact Hours. Corequisite: TEL 101, TEL 102 may be taken at the same time.

TEL 101 INSTRUCTIONAL THEORIES AND METHODOLOGY FOR THE ESL CLASSROOM (3)

Focuses on the instructional language acquisition theories and methods for the teaching of English grammar, speaking, listening, reading, and writing in the ESL classroom. It provides a format for viewing a variety of approaches in critiquing the effective use in the ESL classroom. The class allows students an opportunity to teach a lesson and critique their peers.

45 Contact Hours.

TEL 102 PROCEDURES AND TECHNIQUES FOR THE ESL CLASSROOM (3)

Focuses on the teaching of English grammar, speaking and listening, and reading and writing in the 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.

45 Contact Hours. Corequisites: TEL 100, TEL 101 (may also be taken prior or concurrent to enrollment in this course).

TEL 103 CAREER STRATEGIES FOR THE TESL WORKPLACE (1)

Presents professional 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.

15 Contact Hours. Corequisites: TEL 100, TEL 101, and TEL 102.

TEL 188 TESL TEACHING PRACTICUM (2-3)

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.

45 Contact Hours. Prerequisites: TEL 100, TEL 101 and TEL 102.

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.

45 Contact Hours.

See the list of Specialized Teaching English as a Second Language Courses on the first page of this Course Offerings section.

THE   - Theatre Arts

THE 105 INTRODUCTION TO THEATRE ARTS (3)
*(GT-AH1)

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.

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.

60 Contact Hours.

THE 108 PLAY READING (2)

Introduces students to methods of reading literature for the stage. The course helps students learn to read plays fluently and exercise their imaginations for visualizing how a play looks, sounds, and feels when produced.

30 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.

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.

45 Contact Hours. Prerequisite: THE 111 or permission of instructor.

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.

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.

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.

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.

45 Contact Hours. Prerequisite: THE 131 or permission of instructor.

THE 135 STAGE MAKEUP I (2)

Covers makeup design and application techniques. Techniques include basic corrective, character, old age, and fantasy application.

30 Contact Hours.

THE 136 STAGE MAKEUP II (2)

Continues to explore theatrical makeup design and application techniques. In addition, prosthetics, hair design and other more advanced applications will be explored.
30 Contact Hours. Prerequisite: THE 135.

THE 141 IMPROVISATION I (1)

Helps students learn improvisation skills for performance and character development. Emphasis is placed on "Second City" style of improvisation.
15 Contact Hours.

THE 180 PRACTICUM: VOICE (3)

Provides students with individual tutorials that define, design, and apply specific vocal techniques to correct speaking and singing difficulties. Master class performances provide the opportunity to conjure the energy, charisma and stage command necessary for presentations.
90 Contact Hours.

THE 211 DEVELOPMENT OF THEATRE I (3)

*(GT-AH1)

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.
45 Contact Hours.

THE 212 DEVELOPMENT OF THEATRE II (3)

*(GT-AH1)

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.
45 Contact Hours. Prerequisite: THE 211 or permission of instructor.

THE 218 READERS' THEATRE (3)

Studies ensemble interpretation of literature, poetry, prose, and drama, primarily through the medium of the spoken word.
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.
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.
45 Contact Hours.

See the list of Specialized Theatre Arts Courses on the first page of this Course Offerings section.

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.

45 Contact Hours per credit.

VET - Veterinary Technology

VET 108 INTRODUCTION TO LABORATORY PROCEDURES (3)

Studies the biology, clinical appearance and laboratory diagnosis of parasitic diseases of veterinary and zoonotic importance.
60 Contact Hours. Prerequisite: Admission to the VET program and BIO 111.

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.
45 Contact Hours. Prerequisites: VET 205 and VET 206 or concurrent enrollment in VET 206.

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.
75 Contact Hours. Prerequisite: Admission to VET or ALT program (approval pending). NOTE: Handling of animals will include domestic small and large species, exotic pets and laboratory animals.

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.
45 Contact Hours. Prerequisite: Admission to VET program.

VET 126 INTRODUCTION TO LAB ANIMAL SCIENCE (3)

This course provides students with an overview of the field of laboratory animal care in its many manifestations in biomedical and agricultural research, testing and teaching.
67.5 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.
45 Contact Hours. Prerequisites: MAT 099 or MAT 107 and VET 205.

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.
135 Contact Hours. Prerequisites: VET 108, VET 115, VET 116, VET 120, VET 134, VET 224 and VET 241.

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
90 Contact Hours. Prerequisite: VET 116.

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.
75 Contact Hours. Prerequisite: Admission to the VET or ALT (program approval pending) program and BIO 111.

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.
75 Contact Hours. Prerequisite: VET 205.

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.
60 Contact Hours. Prerequisites: MAT 099 or MAT 107 and VET 205 or VET 206 or concurrent enrollment in VET 206.

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.
60 Contact Hours. Prerequisites: VET 206 and VET 224.

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.
45 Contact Hours. Prerequisite: VET 206.

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.
75 Contact Hours. Prerequisite: VET 116.

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.
90 Contact Hours. Prerequisites: VET 108 and VET 205.

VET 243 VETERINARY DIAGNOSTIC MICROBIOLOGY (4)

Includes the biology, clinical appearance and laboratory diagnosis of bacterial and viral diseases of veterinary and zoonotic importance.
90 Contact Hours. Prerequisite: Admission to the VET program and BIO 111. NOTE: Laboratories will include microscope analysis of samples.

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.
23 Contact Hours. Prerequisite: VET 180.

See the list of Specialized Veterinary Technology Courses on the first page of this Course Offerings section.

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.
22.5 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.
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.
90 Contact Hours. Prerequisite: WEL 103 or permission of instructor.

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.
90 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.
90 Contact Hours. Prerequisite: WEL 104 or permission of instructor.

WEL 113 OXYFUEL AND PLASMA CUTTING (2)

Outlines the skills needed to set up equipment and perform cutting and gouging operations utilizing the oxyacetylene and plasma arc cutting processes.
45 Contact Hours.

WEL 114 OXYACETYLENE WELDING (2)

Teaches the skills necessary to perform safety inspections, make minor repairs, adjust operating parameters, operate oxyacetylene welding equipment, and perform oxyacetylene welding on typical welding joints, brazing, and soldering operations.
45 Contact Hours.

WEL 124 INTRODUCTION TO GAS TUNGSTEN ARC WELDING (4)

Covers welding in all positions and on various joint configurations using the GTAW (TIG) 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.
90 Contact Hours.

WEL 125 INTRODUCTION TO GAS METAL ARC WELDING (4)

Covers welding in all positions and on various joint configurations using the GMAW (MIG) 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.
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 grove plates. Student should be familiar with basic metallurgy pertaining to the weld ability of metals, structural joints, and safety in the welding industry.
90 Contact Hours. Prerequisite: WEL 124

WEL 225 ADVANCED GAS METAL ARC WELDING (4)

Covers welding in all positions on carbon steel plate with the GMAW process. Student should be familiar with basic metallurgy pertaining to the weld ability of metals, structural joints, and safety in the welding industry.
90 Contact Hours. Prerequisite: WEL 125

WEL 230 PIPE WELDING I (4)

Covers safety inspections, minor repairs, operating parameters, and operation of SMAW, GMAW, and FCAW 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.
90 Contact Hours. Prerequisite: WEL 110

WEL 231 PIPE WELDING II (4)

Covers safety inspections, minor repairs, operating parameters, and operation of SMAW, GMAW, and FCAW 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.
90 Contact Hours. Prerequisite: WEL 230

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.
90 Contact Hours.   Prerequisite: WEL 231

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.
90 Contact Hours. Prerequisite: WEL 106

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.
90 Contact Hours. Prerequisite: WEL 106

WST - Women Studies

WST 200 INTRODUCTION TO WOMEN'S STUDIES (3)
*(GT-SS3)

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.
45 Contact Hours.

WST 225 WOMEN AND SOCIAL ACTION (3)
*(GT-SS3)

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.
45 Contact Hours.

WST 240 GODDESSES AND WOMEN IN THE ANCIENT WORLD (3)
*(GT-SS3)

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.

45 Contact Hours.

Course Changes

Courses Added

COURSE NUMBER & NAME	CREDITS
ANT 221 Exploring Other Cultures I	3
ANT 250 Medical Anthropology	3
ANT 263 Anthropology of Folklore	3
ARA 211 Arabic Language III	3
ART 107 Art Education Methods	3
ART 117 Pastel Painting	3
ART 149 Animation Drawing/Design	3
ART 254 Sculpting the Figure	3
BIO 203 Advanced Human Anatomy	2
CAR 133 Construction Framing & Safety	4
CRJ 205 Principles of Criminal Law	3
CRJ 236 CRJ Research Methods	3
CUA 120 Wines and Spirits	2
CWB 246 Advanced Web Animation	3
DEA 132 Medical Emergencies in the Dental Office	3
ELT 107 Fundamentals of Industrial Electronics	3
ELT 149 Digital Devices Troubleshooting	3
ELT 205 Electronic Troubleshooting I	3
ELT 206 Electronic Troubleshooting II	3
ELT 252 Motors and Controls	3
ELT 254 Industrial Wiring	3
ELT 258 Programmable Logic Controllers	3
ELT 259 Advanced Programmable Logic Controllers	3
EMS 190 EMT Professional Development	
ENG 115 Technical English & Comm	3
ENG 201 Writing for Public Discourse	3
ENG 226 Fiction Writing	3
ENG 228 Writing for the Graphic Novel	3
ENT 110 Metrology	3
ENT 120 Statistical Process Control	2
ENT 125 Principles of Quality Assurance	3
ENT 143 Survey Drafting	3
ENT 238 Fluid Power & Controls	3
ENT 289 Capstone	
FSW 100 S-190 Introduction to Wildland Fire	1
FSW 101 S-130 Firefighting Training	2
HHP 142 Intro to Trad Chinese Medicine	3
HHP 204 Applied Aromatherapy	3
HHP 264 Advanced Aromatherapy for Cert.	4
HIT 101 Health Info. Management Science	6
HIT 105 Physician Coding Reimbursement	3
HIT 111 Health Data Management	3
HIT 112 Legal Aspects Health Records	2

COURSE NUMBER & NAME	CREDITS
HIT 188 Health Information Practicum I	2
HIT 221 Clinical Classifications I	5
HIT 222 Quality Management	3
HIT 225 Clinical Classifications I	3
HIT 231 Clinical Classifications II	5
HIT 241 CPT Coding Basic Principles	2
HIT 288 HIT Capstone Course	2
HOS 148 Introduction to Food and Beverage	3
HPR 116 Computers in Health Care	1
HPR 200 Advanced ECG Interpretations	2
HUM 103 Introduction to Film Art	3
HUM 211 Cultural Diversity-Humanities	3
HWE 106 Infant & Child CPR/First Aid	0.5
HWE 113 First Aid & Adult CPR	0.5
IND 113 Perspective & Rendering Techniques	3
IND 161 Introduction to Kitchen and Bath Design	3
IND 231 Sustainable Design	3
IND 261 Advanced Kitchen and Bath Design	3
JOU 121 Photojournalism	3
JPN 101 Conversational Japanese I	3
JPN 102 Conversational Japanese II	3
MOT 125 Basic Medical Sciences I	3
MOT 133 Basic Medical Sciences II	3
MOT 135 Basic Medical Sciences III	3
MTE 244 Lean Manufacturing Prac/Proc	3
PAR 215 Alternative Dispute Resolution	3
PHI 213 Symbolic Logic	3
PHI 218 Environmental Ethics	3
PPT 105 Basic Plant Operation	2
PPT 116 Instrumentation and Control	3
PPT 210 Steam Turbines	3
PPT 215 Power Generation	3
TEC 210 Applied Statics and Strengths of Materials	3
VET 126 Introduction to Lab Animal Science	3
WEL 100 Safety for Welders	1

Courses Deleted

COURSE NUMBER & NAME	CREDITS
IND 112 Graphic Communication	4
HHP 102 Touch for Caregivers	.5
HHP 103 Circle of Healing	1
HHP 104 The Healing Mind	.5
HHP 106 The Creative Mind	1
HHP 110 Neuro-Linquistic Programming	.5
HHP 125 Feldenkrasis Awareness	.5
HHP 140 Assessing Inner Resources II	1
HHP 212 Neurol-Linquistic Programmign II	.5
HHP 213 Spiritual Care	.5

COURSE NUMBER & NAME	CREDITS
HHP 214 Exploring Your Dreams	1
HHP 215 The Role of Art in Healing	1
HHP 216 Humor Playshops	.5
HHP 221 High Level Wellness	1
HHP 222 Self-Hypnosis: The Basics	1
HHP 227 Communication Skills	.5
HHP 235 Mind, Body Healing and Health	3
HHP 236 Dance Therapy and Healing	.5
HHP 237 Stress Reduction with Biofeedback	3
HHP 241 Healing with Imagery	.5
HHP 251 Music Therapy	.5
HHP 267 Living Without Limits	3
NRE 251 General Oceanography	3
MGD 113 Quark XPress	3

Course Number, Course Name, and Credit Changes Since Our Last Catalog

Please see Course Offerings, section for complete course descriptions, contact hours and prerequisites.

Name Changes

OLD NAME	NEW NAME
HOS 111 Food Safety and Sanitation	CUA 101 Food Safety and Sanitation
HPR 216 Pathophysiology	BIO 216 Pathophysiology
CAD 217 3D Studio Viz	CAD 217 3D/VIZ
CAD 219 3D Studio Max	CAD 219 3D/Max
CNG 211 Windows XP Configuration	CNG 211 Windows Configuration
CHE 100 Chemistry in Context with Lab	CHE 105 Chemistry in Context with Lab
CWB 130 Complete Web Editing	CWB 130 Web Editing Tools: Dreamweaver
HHP 263 Creating a Holistic Practice	HHP 263 Creating a Holistic Business Practice
HIS 236 Contemporary U.S. History	HIS 236 U.S. History Since 1945
HIS 101 History of Western Civilization I	HIS 101 Western Civilization: Antiquity -1650
HIS 102 History of Western Civilization II	HIS 102 Western Civilization: 1650-Present
HIS 111 World Civilization I	HIS 111 The World: Antiquity-1500
HIS 112 World Civilization II	HIS 112 The World: 1500-Present
HIS 201 U.S. History I	HIS 201 US History To Reconstruction
HIS 202 U.S. History II	HIS 202 US History Since the Civil War
HIS 208 Native American Experience	HIS 208 American Indian History
HIS 247 Contemporary World History	HIS 247 20th Century World History
IND 200 Kitchen and Bath Design	IND 200 Kitchen and Bath Design I
MAT 106 Survey of Algebra	MAT 099 Intermediate Algebra

Credit Changes

OLD CREDITS	NEW CREDITS
AEC 101 Bacic Architectural Drafting - 5 credits	AEC 101 Bacic Architectural Drafting - 4 credits
AEC 102 Residential Construction Drawing - 5 credits	AEC 102 Residential Construction Drawing - 4 credits
AEC 121 Construction Materials Systems - 4 credits	AEC 121 Construction Materials Systems - 3 credits
AEC 123 Commercial Construction Drawings - 5 credits	AEC 123 Commercial Construction Drawings - 4 credits
AEC 131 Estimating I: Quantity Survey - 4 credits	AEC 131 Estimating I: Quantity Survey - 3 credits
HLT 151 Irrigation Auditing and Scheduling - 2 credits	HLT 151 Irrigation Auditing and Scheduling - 3 credits
HLT 247 Landscape Irrigation Installation - 2 credits	HLT 247 Landscape Irrigation Installation - 4 credits
IND 120 Interior Design II - Space Planning and Human Factors - 4 Credits	IND 120 Interior Design II - Space Planning and Human Factors - 3 Credits
IND 220 Interior Design III - Materials, Details, Codes & Specs - 4 Credits	IND 220 Interior Design III - Materials, Details, Codes & Specs - 3 Credits
IND 225 Lighting Design - 2 Credits	IND 225 Lighting Design - 3 Credits
MAN 160 Entrepreneurship - 3 Credits	MAN 160 Entrepreneurship - 6 Credits

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:

Ms. Bernadette Marquez, Chair
 At-Large (D)

Ms. Tamra J. Ward, Vice Chair
 1st Congressional District (R)

Ms. Wanda Cousar
 5th Congressional District (D)

Ms. Meg Porfido
 2nd Congressional District (D)

Ms. Maury Dobbie
4th Congressional District (D)

Ms. Ledy Garcia-Eckstein
 At-Large (D)

Dr. John Trefny
 7th Congressional District (Unaffiliated)

Non-Voting Members:

Dr. Todd Bergren
 SFAC Representative

Ms. Mandy Beatty
Student Representative

Front Range Community College Area Advisory Council

(With city of residence and month term expires)

Mr. Bill Becker
Westminster,   June, 2010

Ms. Linda Hopkins
Fort Collins

Mr. Terry Lucero
Brighton

Ms. Julia Pirnack
Longmont

Administration

BROWN, Therese,   Interim Vice President (Westminster Campus). M.S., University of Nebraska, 1985; B.S., University of Nebraska, 1981

BUTZEK, James,   Vice President (Larimer Campus) and Chief Academic Officer. Ph.D., Illinois Institute of Technology, 1970; B.S., Loyola University, 1963

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

DORSEY, Andrew, President (College   Wide). M.A., Lesley College, 1993; M.B.A., Harvard Business School, 1985; B.A., Harvard College, 1981

ESPINOZA, Yolanda, Registrar (College Wide). B.A., Regis University, 2005

GOLDSMITH, Carolee, Financial Aid Director (College Wide). B. S., Fort Hays State University, 2004

MAHARAS, Marian, Marketing and Advancement Lead Director (College Wide).   M.A., University of Texas, 1980; B.A., Oklahoma State University, 1972

PASCO, Myra, Human Resources Director (College Wide). B.S., Colorado Christian University, 2006

SIKORA, Celeste, Foundation Director (College Wide). B. A., Loretto Heights College, 1988

SOBANET, Jennifer, Vice President, Finance and Administration. (College Wide). M.B.A., University of Pennsylvania, 1998; B.A., Marshall University, 1993

Instruction and Student Services

ABT, Phyllis, Executive Director and Dean of Secondary Programs (Larimer Campus). Ph.D., Colorado State University, 1980; M.H.E., Colorado State University, 1974; B.S. Ed., Eastern Illinois University, 1972

BARRATT, Jeff, Dean of Instruction (Westminster Campus). M.S., Pittsburg State University, 1997; B.A., Missouri Southern State College, 1993

BINARD, Kristina, Dean of Student Services (Larimer Campus). Ph.D., University of Colorado, Denver, 2007; M.S., Colorado State University, 1994; B.S., Colorado State University, 1989

BOGGS, Keith, Dean of Career and Technical Education (College Wide). M.S., Regis University, 2005; M.A., University of Denver, 1969; B.A., University of Denver, 1967

HOGAN, Stacey, Interim Dean of Student Services (Boulder County Campus). Ph.D., Colorado State University, 2005; M.A., University of Denver, 1997; B.A., Vassar College, 1994

JAMISON, Matthew, Interim Dean of Instruction (Boulder County Campus).   M.A., Mankato State University, 1991; B.S., Cornell College, 1989

LOVE, Sandra, Dean of Instruction (Boulder County Campus). M.B.A., University of Phoenix, 1986; B.S.N., University of Iowa, 1958

MCDONALD, Renee, Interim Dean of Student Services (Westminster Campus). M.A., University of Colorado, 2005; B.A., Jamestown College, 1994

PELLISH, Catherine, Interim Dean of Instruction (Westminster Campus). M.S., University of Colorado, 1997; B.S., Marquette University, 1985

ROBINSON, Sharon, Dean of Instruction (Larimer Campus). M.S., Emporia State University, 1991; B.S., University of

Oklahoma, 1969; A.A., University of Oklahoma, 1964

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

ZEKONIS, Michael, Dean of Institute for Community and Professional Development (Westminster Campus). M.S., University of Pennsylvania, 1991; B.S., West Chester State University, 1982

Faculty

ALTMAN, Mardie, Animal Technology. A.A.S., Front Range Community College, 1996; B.S., Colorado State University, 1975

ARONSON, Steve, Building Construction Trades.

ATKINS, Rodney, Engineering Graphics Technology. B. Ed., Colorado State University, 1985; A.A.S., Community College of Denver, North Campus, 1979 and 1980

AUERBACH, Michelle, Literature/Humanities, M.F.A,, Naropa University, 2004; B.A., Columbia University, Bernard College, 1990

BACHELER, Daniel, Horticulture.   B.S. Horticulture, 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,   Marissa, English. M.F.A., Old Dominion University, 2002; B.A., Morehead State University, 1999

BAILEY, Tamara, Nursing. M.S.N., University of Colorado, 2001; AD-RN Community College of Denver, 1976

BAILOR, Susan, English/Communications. Ph.D., University of Colorado, 1998; M.A., Boise State University, 1991; B.U.S., University of New Mexico, 1973

BARBUR, John, Biology. M.S., Portland State University, 1996; B.S., Portland State University, 1992; A.S., Mt. Hood Community College, 1982

BARNES, Cheryl, Business/Marketing/Management. M.B.A., University of Notre Dame, 1994; B.A., Indiana University, 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. 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

BECKLEY, Sheila, Culinary Arts. B.S., University of Philippines, 1998

BELT, Soley, Architectural & Landscape Design. M.L.A., University of Georgia, 1999; B. S., University of Colorado, 1995

BENNANI, Farah, Biology. Ph.D., Microbiology, IBN TOFAIL University, 2000; B.S., Mohamed V University, B.S., University of Philippine, 1998

BERG, Mary, Sociology. Ph.D., University of Illinois, 1977; M.A., University of Illinois, 1974; B.A., Washington State University, 1971

BERLEY, Carla, Developmental Math.   M.A., University of Northern Colorado, 2004; B.A., University of Colorado, 1990

BERMAN, Brandon, Multimedia Graphic Design. M.A., Center for Humanistic Studies, 1994; B.A. University of New Mexico,

1992

BETTS, Elaine, Multimedia Technology. B.A., Metropolitan State College of Denver, 1975

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

BORG, Jeffrey, Political Science. M.Div., University of Denver, 1996; Pacific School of Religion, 1988; B.A., Grinnell College, 1983

BRENKERT, Joseph, Development Mathematics, B. A., University of Michigan, 1997; M. A., Portland State University, 2005

BROKAW, Lydia, Art. M.F.A., University of South Florida, 1995; B.A., Metropolitan State College of Denver, 1981

BROOKS, Ohlan, Chemistry. M.S., San Jose State University, 1994; B.S., North Georgia College, 1980

BROWN, Louise, Biology. M.S., Texas Christian University, 1980; B.S., Texas Christian University, 1978

BUSCH, Nowell, American Sign Language. M.S., McDaniel College, 1994; A.A.S., Rochester Institute of Technology, 1979

BYER, Beverly, Psychology. M.A., University of Colorado, 1988; B.S., Colorado State University, 1986

CALVERT, Linda, Pharmacy Technology. B.S., University of Phoenix, 2002

CAPRARO, Craig, Automotive. A. S., Red Rocks Community College, 2005

CARDINAL, Dayna, Nursing. M.A., Creighton University, 2002

CARRASQUEL, Miriam, Spanish/ESL. M.A., University of Kansas, 1990; B.A., Instituto Universitario Pedagogico de Caracas, 1986

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. M.A., Colorado State University, 1993; TESOL. M.A., Colorado State University, 1993; B.A., Universidad Nacional de Cuyo, Argentina, 1979

COCKERHAM, Bryan, Mathematics. M.Ed., Texas State University-San Marcos, 2007; B.S., Texas State University-San Marcos, 2005

COLE, Kelli, Developmental 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

COOK, Lori, Nursing. B.S., Regis University, 2004

COSTE, Michael, Philosophy. M.A., University of California, 1987; B.A., Washington and Lee University, 1982

CRAINE, Donna, English. M.A., University of Wyoming, 1980; B.A., University of Wyoming, 1978

CRAVAN, Deborah, Multimedia Graphic Design. B.A., Colorado State University, 1993

CRYAN, Gary, Automotive Technology. B.S., State University of New York, 1974; A.A.S., State University of New York, 1972

CULOTTA, Laura, Animal Technology. B. A., Colorado State

University, 2002

DANNAHOWER, Heather, Forestry/Wildlife. B.S., Kansas State University, 2002

DAUGHERTY, G. Michael, Emergency Medical Services. B.A., Indiana University, 1974

DAUGHERTY, Ray, Landscape Horticulture. B.S., Colorado State University, 1988

DAVIS, Joseph, Automotive Technology. A.A.S., Des Moines Area Community College, 1973

DEBELL, Jannette, Dental Assisting. B.S., Colorado State University, 1993

DEROCHE, Andrew, History. Ph.D., University of Colorado, 1997; M.A., University of Maine, 1993; B.A., Princeton University, 1989

DEUTSCH, Robert, Sociology. M.A., University of Colorado, 1973; B.A., State University College, 1971

DIBENEDETTO, Thomas, Nursing. M.S., University of Northern Colorado, 1993; B.S., University of Northern Colorado, 1984

DINWIDDIE, Alan, Mathematics. M.A., University of Nebraska, 1994; M.S., Pensacola Christian College, 1982; B.S., Kearney State College, 197

DODARO, Kathleen, Business. Ph.D., Capella University, 2006

DOMENECH, Concepcio, Spanish. M.A., University Autonoma Barcelona, 1992; B.A., University Autonoma Barcelona, 1990

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

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

ELLER, Mark, Physical Education. M.S., Arizona State University, 1992; B.A., University of Northern Iowa, 1982

ELLIOTT-LEE, Diane, Nursing. M. S, University of Nebraska Medical Center, 1978; B.S., Colorado State College, 1972

ERLICH, Stewart, Developmental English. M.Ed., Rutgers State University of New Jersey, 2000; B.A., Rutgers State University of New Jersey, 1995

FAUSETT, Janis, Chemistry. M.S. Ed., University of Colorado, 1975; B.S. Ed., Ohio University, 1972

FEINHANDLER, Ian, Geography. 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

FREDICKSON, Lana, Mathematics. M. A., University of Northern Colorado, 1989; B. A., College of Southern Utah, 1973

GALLAGHER, Margaret, English. M.A., Colorado State University, 1991; B.A., University of Northern Colorado, 1974

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

GAY, Philip, Accounting. M.B.A., University of Colorado, 1980; B.S., University of Colorado, 1976

GEARY, Mary, English. M.A., George Mason University, 1997; B.A. George Mason University, 1994

GEIST, Monica, Mathematics. Ph.D.,University of Northern

Colorado, 2008; M.S., University of Colorado, 1996; B.S., Colorado State University, 1984

GILLILAND, Mary (Claire), Nursing. M.S.N., University of Northern Colorado, 2003; B.S., University of Florida, 1999

GLUSTROM, Merrill, Remedial English. Ph.D., University of Wisconsin, 1981; M.S., University of Wisconsin, 1975; B.A., University of Wisconsin, 1972

GOMEZ, Fortino, English. M.A., Naropa University, 2007

GONZALES, Martha, Sociology. M.A., University of Colorado, 1993; B.A., University of Colorado, 1988; B.S., University of Colorado, 1970

GRAHAM, Patricia, Nurse Aide Program Director. M.S.N., University of Colorado, 2008; B.S.N., University of Colorado, 2006; A.A.S., Front Range Community College, 2000

GUTHRIE, Brad, 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

HERRMANN, Cheryl, Developmental Mathematics. M.A., University of Colorado, 1986; B. A., University of Colorado, 1978

HILL, John, Humanities/Theatre. M. F. A., University of Nebraska-Lincoln, 1982; B. A., Loretto Heights College, 1980

HUIBREGTSE, Melanie, Med. Prep., M.S., Colorado State University, 1986

HUNTLEY, BT, History. M.Ph., New York University, 1988; M.A., New York University, 1984; B.A., Drake University, 1981

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, Shawna, English Developmental Writing/Composition. M.A., Colorado State University, 1998; B.A., University of Northern Colorado, 1993

JAYNES, Jennifer, Mathematics. M. S., California State University-Long Beach, 2008; B. S., California State University-Long Beach, 2006

JENSEN, Megan, Nurse Aide. B.S.N., Fitchburg State College, 1998

JOHNSON, Mark, Emergency Medical Services. B.S., Colorado State University, 1990

JORDAN-HELSER, Anna, Nursing. M.S., Regis University, 2008

KAMINSKI, Stephen, Computer Information Systems. M.S., University of Illinois, 1974; B.S., University of Illinois, 1973

KEELY, Jeffrey, Construction Technology. M.S., University of Washington, 2004; B.S., University of Washington, 1990

KEENAN, Catlyn, M.A., University of Colorado, 2001; Philosophy. B.A., Hendrix College, 1997

KELLER, Colleen, Nursing. M.S., San Diego State University 1990; B.S.N., University of Nebraska, 1980: A.D.N., Youngstown State University, 1977

KELLOGG, Joseph, Computer Information Systems. M.S., University of Colorado, 1992; M.I.M., American Graduate School of Management, 1989; B.A., University of Colorado, 1987

KENDALL, SeonAh, Business/Accounting. M. S. , Colorado State University, 2005; B. S., Colorado State University, 2003

KING, Robyn, Nursing. M.S., University of Northern Colorado, 2005; B.S., University of Northern Colorado, 1989

LARABEE, Patrick, Ph.D., Logan College of Chiropractic, 1996; Biology. B.S., Logan College of Chiropractic, 1995

LEFF, Aaron, Developmental English. M.A., Colorado State University, 2007

LEWANDOWSKI, April, English/Development 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

LOY, Ivan, Mathematics. M.S., University of Wyoming, 1998; B.S., University of Nebraska, 1992

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

MATTSON, Mary, Chemistry. Ph.D., University of California, 1988; M.S., University of California, 1986; B.A., Barat College, 1982

MCDOUGALL, John, Business & Information Technology. M.B.A., Boston University, 1987; B.A., Rutgers University, 1980

MCMILLAN, Angelica, Spanish. M.A., University of New Mexico, 1996; B.A., University of California, 1993

MELARA, Jose Gustavo., Spanish. M.A., University of Colorado, 1993; B.A., Queens University, 1991

MENDT, Kathy, English. M.A., University of Colorado, 1996; B.A., University of Colorado, 1985

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

MILHAUSEN, Michael, Microbiology. Ph.D., Syracuse University, 1974; B.S., Lemoyne College, 1967

MILLER, Laurie, Psychology. M.A., Lesley College, 1995; B.A., Miami University, 1979

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

MOBLEY-TANAKA, Jeannette, Anthropology. Ph.D., Arizona State University, 2005; M.A., University of Colorado 1990; B.A., University of Colorado, 1987

MORRISON, Spencer, Behavioral Neuroscience. Ph.D., University of Colorado, 1995; Psychology. M.S., Villanova University, 1992; B.S., Wake Forest University, 1986

MURPHY, Thora Jo, Early Childhood Education. M.A., University of Colorado, 1992; B.S., Central Missouri State University, 1976

MUSSER, Gregg, Automotive Technology.   Certificate Auto/Mechanics Technician, January 2008

NEW, Clint, Ford Motor.

NEWTON, Alexis, Nursing. M.S.N., University of Cincinnati, 1983; B.S.N., Fairleigh Dickinson University, 1977.

NUNNALLY, Amy, Anatomy and Physiology. M.S., University of Colorado, 2002; B.S., Birmingham South College, 2000

OLIVER, Blair, English. Ph.D., University of Denver, 1996; M.F.A., University of Montana, 1991; B.A., Dickinson College, 1988

PATTERSON, Barbara, Education, Ph.D., Colorado State University, 2009; B.S., University of Wisconsin, 1981

PERRY, Merry, Med Prep. LPN, Nursing, 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

QUILLER, Dana, Dental Assisting. D.D.S., University of Colorado 1979; B.S., Colorado State University, 1970

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

REMMEL, Lynda, Interpreter Training. M.A., University of Colorado, 1990; B.A., Pacific Lutheran University, 1975

RENDAL, Camille, Art. M.F.A., New Mexico State University, 1996; B.F.A., Otis Parsons, 1987

RIEDL, Ann, Biology. Ph.D., Case Western University, 1994; B.S. University of Notre Dame, 1985

ROCKS, Lindsay, Astronomy. Ph.D., University of Wisconsin, 2008

ROGERS, Gerald, Paralegal. J.D., University of Denver, 1988; B.A., University of Northern Colorado, 1984

ROMERO, Christopher,   Instructional Dean (Larimer Campus). 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

ROSTAD, Teresa, Nursing. B.S.N, South Dakota State University, 2002

ROUZE, Kerri, Nursing. M.S.N., University of Colorado, 2001; B.S.N., Wagner College, 1988

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, Development/Transfer English. M.A., University of Colorado, 1989; B.A., Metropolitan State College of Denver, 1981

SAHLEN, Gregory, History. M.A., University of Colorado, Denver 2002; B.S., Colorado State University, 1992

SALAHUB, Eric, Philosophy. M.A., Colorado State University, 1994; B.S., Whitman College, 1990

SAUNDERS, Mark, English. M.A., University of Colorado, 1994; B.A., University of California, 1983

SCARPONE, Janet, Speech. M.S., Southern Illinois University, 1976; B.A., University of Bridgeport, 1975

SCHMIDT, Kimberly, Veterinary Technician. A. A. S.,   Bel-Rea Institute Veterinary Technician Training, 2000

SCHORZMAN, Karla, English. M.A., University of Colorado, 2000

SEVY, Suzanne, Nurse Aide. B.S.N., University of Colorado, 1988

SHAEFER, Dana, Mathematics, M.E., University of Colorado, 1994; B.S., University of Colorado, 1991

SHARER, Elizabeth, Art History. M.A., University of Colorado, 1980; B.A., Oberlin College, 1958

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

SPEAKS, Jason, Nursing. B.S.N, Colorado State University, 2005

SMITH, Barbara, Nursing. M.S.N., University of Northern Colorado, 1994; B.S.N., University of Northern Colorado, 1991

SMITH, Lauren, Accounting. B.S., University of Wisconsin-Superior, 1988

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

SOKOL, Mary, Mathematics. M.A., University of Colorado, 1989; B.S., University of Nebraska, 1970

SPEAKS, Jason, Nursing. B.S.N, Colorado State University, 2005

STANSBURY, Annita, Nurse Aid. Ph.D., Clayton College of Natural Health, 2008; M.S.N., University of Northern Colorado, 2000; B.S., University of Northern Colorado, 1998; A.A.S., Front Range Community College, 1994

STANTON, Jennifer, Mathematics. M.A., National University, 2002; B.S., San Diego State University, 1997

STENCEL, Judy, Computer Information Systems/Business. M.A., University of Northern Colorado, 1998; B.A., University of Northern Colorado, 1983

STILWELL, Matthew, Development English. M.A., Colorado State University, 2000; B.A., University of Wisconsin, 1991

SULLIVAN, John, English. Ph.D., National University of Ireland, 1998; M.A., National University of Ireland, 1988; B.S., Columbia College, New York, 1986

SZWANKOWSKI, 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

THROGMORTON, Debra, Music. M.M., University of Northern Colorado, 1981; B.M., University of Wyoming, 1981

TOFOLLI, Todd (Reno) , Automotive Technology. A.A.S., Front Range Community College, 2000; B.A., University of Minnesota, 1993

TOWNSEND, Peter, Welding.

TRUMMER, Kathleen, Psychiatric Nursing. M.S.N., University of Colorado, 1992; B.S.N., Viterbo College, 1987

UNNITHAN, Shashikala, Chemistry. M.B.A., Colorado State University, 1994; Ph.D., University of Nebraska, 1985; M.S., Indian Institute of Technology, New Delhi, India, 1980

VAN DE KAMP, Jennifer, Biology. Ph.D., University of Colorado, 1991; B.S., University of Colorado 1984

VERDE, Laurie, Nursing. B.S., University of Northern Colorado, 1990

VILLIERS, Susan, Medical-Surgical Nursing. M.S., University of California, 1992; B.S., Seattle University, 1975

VINTON, Ruben, Welding. B.S., Colorado State University, 1996; A.A.S., Aims Community College, 1976

VOSS, James, Mathematics. M.A., San Francisco State University, 1996; B.A., University of Colorado, 1992

VOSS, Julie, Developmental English. M.A., San Francisco State University, 1999; B.A., San Francisco State University, 1995

WADE Jeffry, Automotive.

WAGNER, Richard, Early Childhood Education. M.A., Northern Arizona University; B.S., University of Wisconsin, 1976

WALLERT, Christy, Mathematics. M.A., Rutgers University-Camden, 2007; B. A., University of Delaware, 2000

WALSH, Jason, Welding. 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

WEBB, Karen, Nursing. B.S.N., Saint Cloud State University, 2004; B.S., Saint Cloud State University, 1999

WEHDE, Marilee, Humanities/German. M.A., Regents College, 1998; B.A., University of Northern Colorado, 1977

WENTE, Clara, Astronomy/Physics. M.S., 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, Glenn, Clean Air Technology. M.S., Missouri University of Science & Technology, 1982; B.S., University of Colorado, 1977

WILSON, Matthew, Economics. Ph.D., University of Texas, 2000; University of Colorado, 1991

WUJEK, Joseph Jr., Architectural Technology. B.S., Metropolitan State College of Denver, 1989; M.A., University of Northern Iowa, 1979; B.S., Montclair State College, 1978

WYGANT Cecilia, History. Ph.D., Texas Tech University, 2007; M.A., Texas Tech University, 2004; B.A., Texas Tech University, 2003

ZADEH, Allyson, Speech. M.A., University of Northern Colorado, 2000; B.A., University of Northern Colorado, 1997

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.

Student Rights and Responsibilities

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.

FRCC does not discriminate on the basis of race, color, creed, national origin or ancestry, gender, sexual orientation, religion, veteran status, age, or disability in admission or access to, or employment in, its educational programs or activities. It is FRCC's intent to comply with the letter, intent and spirit of Title VI of the Civil Rights Act, Title IX of the Education Amendments, Section 504 of the Rehabilitation Act of 1973 as amended in 1978, and the Americans with Disabilities Act of 1990, to ensure that discrimination does not exist in FRCC's policies, regulations, or operations.

The following person has been designated to handle allegations regarding nondiscrimination policies: Myra Pasco, Director of Human Resources, 303-404-5473, 3645 West 112th Avenue, Westminster, CO 80031. Grievance procedures for Title IX, Section 504, and ADA have been established for students and employees who believe that discrimination has occurred.

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 day Front Range Community College receives a request for access. A student should submit to the Registrar's 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, the Registrar will make arrangements to obtain those records.

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, 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 veteran's administration, 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. A College official has a legitimate educational interest if the official needs to review an education record 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.

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.

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; Date of birth; Major field of study; Participation in officially recognized activities and sports; Dates of student attendance, part-time or full-time enrollment status; Degrees/certificates and awards student has earned; Most recent educational institution attended by the student; and the College issued student e-mail account.

Additionally, address, phone number, and e-mail addresses 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 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.

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

Nondiscrimination on Basis of Disability

As part of the Rehabilitation Act of 1973, as amended in 1978 (Public Law 93-112), Congress enacted Section 504, which provides that no physically or mentally handicapped person in the United States shall, solely by reason of handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Subpart B of the regulations, dealing with employment practices, bars discrimination by recipients of federal assistance in recruitment, compensation, hiring, job assignment and classification, and fringe benefits. It also requires employers to make reasonable accommodation to qualified disabled applicants or employees upon request.

FRCC complies fully with the guidelines of Section 504, providing support services to students with documented disabilities, so that they can access a full range of educational programs. In addition, FRCC complies with the Americans with Disabilities Act of 1990 (ADA), and makes reasonable accommodations, so that people with disabilities may be productively employed at FRCC, as well as participate in educational programs. For further information, contact the Disability Services Office at the Larimer or Westminster Campuses, or the front desk staff at the Boulder County Campus or the Brighton Center.

Policy on Exclusionary Orders

FRCC, acting through its President, any Vice President, or Chief of Public Safety ("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 Office of Public Safety.

Public Safety

In compliance with the Crime Awareness and Campus Security Act of 1990, campus crime statistics and information on campus security policies are available to current and potential students. See the current class schedule for the latest information.

Computer Labs and Computer Viruses

Students should be aware that due to the nature of their use, computers in FRCC's computer labs are susceptible to computer viruses, which could be passed to other computers via files saved on disks. FRCC is committed to reducing the virus threat in the labs in many ways, 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 disks are available in the labs.

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 computer network is prohibited. For more information on FRCC's computer policy, go to *www.cccs.edu/SBCCOE/policies.html* and see Electronic Communication Policy.

Wireless Internet access is available on all campuses.

Student Right To Know

FRCC provides information about completion and graduation rates on the FRCC website. Information about crimes on campus and public safety programs are published in the class schedule each semester and are available from the Public Safety Office. This is in compliance with the Federal Student Right To Know and Campus Security Act. 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.

Student Code of Conduct

Student Rights, Freedoms and Responsibilities

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, which includes the right to:

- Inquire about, 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 (in accordance with FERPA and college policy).
- Have access to faculty members during their posted office hours.
- Receive reasonable academic assistance from the institution.

Freedom on campus, which includes the right to:

- Be free from harassment or discrimination based on race, national origin, gender, religion, disability, age, or sexual origin.
- 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 exigent 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, which provides 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 which provides 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.

Student Grievance Procedure

FRCC has a formal student grievance procedure that provides students the right to seek redress, when they believe that their rights or freedoms have been violated. A grievable offense is any alleged action that violates or inequitably applies written college policies or procedures. Students may not formally grieve a course grade, but may pursue grading clarification with the faculty member and the dean of instruction, and file a formal academic appeal. Procedures for lodging informal and formal grievances are available in the Office of Student Life, college information desks, the Office of the Dean of Student Services, or go to www.frontrange.edu.

Violations of Student Code of Conduct

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

- Plagiarizing, cheating or helping someone else violate reasonable standards of academic behavior.   Students who engage in any type of academic dishonesty are subject to academic consequences as determined by the instructor and disciplinary action as outlined in the Front Range Community College Disciplinary procedures.
- Forging, altering, or misusing college documents.
- Physical abuse of any person on college property or at events sponsored or supervised by the college, or conduct that threatens one's own or another person's health or safety, including the use of skates, bikes, skateboards or roller blades, except in areas that may be specifically designated for that use.
- Theft or damage to property that belongs to the college, a member of the college community, or a visitor.
- Unauthorized entry to, or use of, college facilities.
- Violating college policies that govern campus processes or use of college facilities including grounds and parking lots.
- Violating college traffic rules or regulations (for a complete set of parking rules, please contact the public safety office).
- Engaging in the unauthorized or unlawful manufacture, distribution, dispensation, possession, or use/abuse of alcohol or illicit drugs on property owned by or under the control of FRCC; or as a part of college activities whenever they may occur.
- Possessing, consuming or distributing any alcoholic beverage or controlled substance in violation of college rules and regulations, or appearing on campus while under the influence or intoxicated.
- Use of any kind of tobacco product is prohibited in college owned or leased facilities.
- Disorderly, lewd, indecent or obscene conduct on college property or at college-sponsored events.
- Engaging in any disruptive behavior which negatively affects or impedes the teachers' ability to teach, the students' ability to learn (regardless of the mode of educational delivery or class setting), or disrupts the general operation of the college.

- Using degrading or abusive language to any person or harassing any person with gesture or language, including cursing.

- Possessing on college property firearms, explosives, or other dangerous weapons; weapons include, but are not limited to, firearms, slingshots, martial arts devices, brass knuckles, hunting knives, switchblade knives or any instrument designed to look like a weapon and used to cause fear in or to assault another person.

- Leaving children unattended in campus buildings or on grounds; children are permitted in class only with the instructor's permission.

- Influencing or attempting to influence/intimidate any employee or student of the college by offering bribes or favors, including sexual favors or threats or menacing behavior.

- Knowingly falsify and, with malicious intent, publishing or distributing, in any form, material that tends to impeach the honesty, integrity, virtue or reputation of another person.

- Violating any municipal, county, state or federal law, statute or ordinance when such violations interfere with the college maintaining good order or with the college's educational goals.

- Engaging in behavior that may constitute sexual misconduct including but not limited to, continued contact after any request to have contact stopped, sexually suggestive looks, comments, deliberate touching, attempt to kiss or fondle, pressure for sex in exchange for grades or favors, other actions of sexual nature which interfere with school performance or create an intimidating, hostile or offensive learning environment.

- Unauthorized or fraudulent use of the college facilities, telephone system, mail system or use of either for an illegal act or any act prohibited by the Code of Conduct.

- Unacceptable uses of any college-owned computing equipment and/or network. This includes, but is not limited to, knowingly spreading computer viruses; sending harassing, intimidating and/or threatening messages; reposting personal communications without the author's consent; copying protected material in violation of copyright law; using the network for financial gain, commercial activity, or illegal activity; accessing the network using another individual's account; downloading, loading, or executing software without appropriate authorization; any other attempt to compromise network integrity.

- Interfering with judicial/grievance procedures or outcomes, including, but not limited to, falsification, distortion or misrepresentation of information before a hearing officer or judicial board; harassment and/or intimidation of any member of the judicial/grievance board, or college personnel, before, during or after a proceeding; or failure to comply with the sanction(s) imposed by a hearing officer.

- Knowingly pursuing malicious, frivolous or fraudulent charges against a student or staff member without cause.

- A student group or organization and its officers may be held collectively or individually responsible when a violation of this code by those associated with the group or organization has the consent or encouragement, whether tacit or overt, of the group or organization's leaders, officers or spokespersons. The Dean of Student Services may direct the officers, leaders or any identifiable spokesperson for a student group or organization to take appropriate action designated to prevent or end a violation of this code by the group or organization. Failure to make reasonable efforts to comply with the directives of college representatives will be considered a separate violation of this code by the officers, leaders, or spokespersons for the group or organization and by the group or organization itself.

Plagiarism

Front Range Community College considers plagiarism as a serious violation of the Student Code of Conduct. Such conduct is subject to disciplinary action and may include failing the assignment, failing the course, dismissal from the class or college, and other possible disciplinary actions. Plagiarism applies to any material written by someone else. This material can be published in books, magazines, journals and newspapers. It may also include lyrics, computer code, scientific charts and graphs, and materials published on websites via the Internet. When students use information from these sources, they are required to properly cite and document the sources utilized. Students should consult their instructor for the appropriate methods for citing and documenting sources. (Refer to section entitled "Academic Integrity".)

Disciplinary Procedures

Please consult the college website, a college Student Life office, or the campus Dean of Student Services for procedures.

If there is a finding that a student has violated the Student Code of Conduct, one or more of the following sanctions may be imposed:

a. No Action

b. Warning

c. Probation for a specified length of time

d. Removal from one class, multiple classes or all classes

e. Removal from any leadership position on campus

f. Removal from on-campus employment

g. Forfeiture of tuition and fees for the semester

h. Restriction of campus access

i. Restitution and community service

j. Suspension for a specified length of time

k. Summary Suspension

l. Permanent Suspension/Expulsion

m. Other sanctions as appropriate

Disciplinary procedures are listed in the FRCC Student Handbook. Copies are available in the Office of Student Life, at the college information desks, and in the Office of the Dean of Student Services. Interpretation of the disciplinary procedures is the responsibility of the Dean of Student Services.

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, deplores 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 between 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:

- Sexual flirtation or prolonged staring

- Sexually suggestive looks, gestures or sounds

- Sexually explicit statements, teasing, jokes or anecdotes

- Pressure for dates or meetings

- Sexually demeaning comments that imply that one sex is inferior to another

- Continued contact after any request to have contact stopped

- Offensive physical contact, such as patting, pinching, cornering, standing close, or attempts to fondle

- Subtle pressure for sexual activity

- Requests for sex in exchange for grades or favors, or to avoid poor grades or discipline

- Consensual relationships between employees and students

- Other actions of a sexual nature which interfere with school performance or create an intimidating, hostile or offensive learning environment

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 at the Boulder County, Larimer and Westminster Campuses. Complaints against FRCC employees should be filed with the Human Resources Office.

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