FRONT RANGE COMMUNITY COLLEGE

CATALOG

2023–2024

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FRONT RANGE COMMUNITY COLLEGE

Boulder County Campus • Larimer Campus • Westminster Campus • FRCC Online Learning

TABLE OF CONTENTS

2023-2024 CATALOG

WELCOME

Catalog Usage

Which Catalog to Use?

This catalog is effective beginning Summer Semester 2023 for students enrolling at Front Range Community College for the first time. Continuing students who have not had a 12-month lapse in enrollment will be allowed to use the requirements listed in any catalog published while continuously attending the college. Students may not combine requirements from multiple catalogs in order to graduate.

Other Formats Available

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

Where to Find Catalog Updates?

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

Additions and changes may occur because of updates to state or federal law, CCCS policies or procedures, college regulations or accreditation requirements. Updates, changes and addenda to this catalog can be found in the Catalog Updates section of this catalog.

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

Academic Calendar

Summer Semester 2023

Class Sessions: START 1

10-Week Classes	May 30 - Aug 7
1st 5-Week Classes	May 30 - July 3
Weekend Classes	June 3 - Aug 6

Class Sessions: START 2

8-Week Classes	June 13 - Aug 7

Class Sessions: START 3

2nd 5-Week Classes	July 5 - Aug 7

Special Days & Holidays

Memorial Day: College Closed. Semester starts next day	Mon May 29
Juneteenth: (Observed) College Open. Class sessions optional	Mon June 19
Independence Day: College Closed. No Classes	Tue July 4
Grades Due (Noon)	Thur Aug 10

Fall Semester 2023

Faculty Work Days

9-Month Faculty Report	Mon Aug 14

Class Sessions: START 1

Weekend Classes	Aug 19 - Dec 10
15-Week Classes	Aug 21 - Dec 11
1st 12-Week Classes	Aug 21 - Nov 13
1st 10-Week Classes	Aug 21 - Oct 30
1st 7-Week Classes	Aug 21 - Oct 9
1st 5-Week Classes	Aug 21 - Sept 25
14-Week Classes	Aug 28 - Dec 11

Class Sessions: START 2

13-Week Classes	Sept 5 - Dec 11
2nd 12-Week Classes	Sept 12 - Dec 11

Class Sessions: START 3

2nd 10-Week Classes	Sept 26 - Dec 11
2nd 5-Week Classes	Sept 26 - Oct 30
2nd 7-Week Classes	Oct 17 - Dec 11
3rd 5-Week Classes	Oct 31 - Dec 11

Special Days & Holidays

Labor Day - College Closed, No Classes	Mon Sept 4

Fall Break - All Campuses - College Closed	Nov 23 Only
Fall Break - All Campuses - No Classes	Nov 20 - Nov 26
Grades Due (Noon)	Thur Dec 14

Spring Semester 2024

Faculty Work Days

9-Month Faculty Report	Mon Jan 8

Class Sessions: START 1

Weekend Classes	Jan 20 - May 5
15-Week Classes	Jan 16 - May 6
1st 12-Week Classes	Jan 16 - Apr 8
1st 10-Week Classes	Jan 16 - Mar 25
1st 7-Week Classes	Jan 16 - Mar 4
1st 5-Week Classes	Jan 16 - Feb 19
14-Week Classes	Jan 23 - May 6

Class Sessions: START 2

13-Week Classes	Jan 30- May 6
2nd 12-Week Classes	Feb 6 - May 6

Class Sessions: START 3

2nd 5-Week Classes	Feb 20 - Mar 25
2nd 10-Week Classes	Feb 20 - May 6
2nd 7-Week Classes	Mar 12 - May 6
2nd 7-Week Classes LC	Mar 19 - May 6
3rd 5-Week Classes	Mar 26- May 6

Special Days & Holidays

Martin Luther King, Jr. - College Open, No Classes	Mon Jan 15
Spring Break - LC - College Open, No Classes	TBA
Spring Break - BCC/WC - College Open, No Classes	TBA
Grades Due (Noon)	Thur May 9
Commencement - Larimer Campus	TBA
Commencement - Boulder County Campus	TBA
Commencement - Westminster/Brighton Campuses	TBA

Summer Semester 2024

Class Sessions: START 1

10-Week Classes	May 20 - July 26
1st 5-Week Classes	May 20 - June 24
Weekend Classes	May 24 - July 28

Class Sessions: START 2

8-Week Classes	June 3 - July 29

Class Sessions: START 3

2nd 5-Week Classes	June 24 - July 29

Special Days & Holidays

Memorial Day: College Closed. Semester starts next day	Mon May 27
Juneteenth: (Observed) College Open. Class	Mon June 17

sessions optional	
Independence Day - College Closed July 4, No Weekend Classes	Thur July 4
Grades Due (Noon)	Thur Aug 8

To view your Semester Calendar in more detail, go to www.frontrange.edu/calendar/

Admissions Procedures

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

Application for Admission

Prior to enrolling at the college, students must complete and submit an Application for Admission online at www.frontrange.edu/apply.

For returning students, students who are currently attending a local high school and wish to enroll concurrently at the college, students under the age of 17, or students who wish to attend on an international student visa, please review the Special Admission Procedures in the Admissions section of this catalog.

Special Admission Procedures

Readmission (Former Students)

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

High School Students Seeking Concurrent Enrollment Options

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

Underage Admission

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

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

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

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

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

International Students

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

International students must complete the following procedures to be admitted to the college:
- Complete an Application for Admission online at www.frontrange.edu/apply
- Complete the Supplemental Information form and attach required documentation at www.frontrange.edu/international

Required documents include:

1. Passport
2. Transcripts:
   a. High school transcript or diploma indicating completion or graduation date
   b. College transcript from any other college or university attended
3. Certified documentation of English proficiency as indicated by:
   a. Test of English as a Foreign Language (TOEFL) score of 153 or higher on the Computer-Based exam (FRCC code is 4119), or Internet-Based Test (iBT) score of 53 or higher, or
   b. International English Language Testing System (IELTS) score of 6.0 or higher, or
   c. Duolingo score of 85 or higher, or
   d. Other approved exceptions (i.e., English as a Second Language programs)
4. Affidavit of Financial Support document and a statement of the student's or the sponsor's financial resources. The statement must show minimum funds equivalent to US $36,000 deposited in a financial institution to cover expenses for each academic year OR $28,675 for students with housing sponsorship. Additional funding of $5,000 per dependent will also be required. Arrangement for payment of tuition and fees must be made with the campus cashier by the payment deadline. Students sponsored by foreign governments must submit a valid authorization. While the college bills approved third parties for tuition and fees, international students are ultimately responsible for payment of all tuition and fees.

International Students transferring from another college must also submit copies of:
- Visa
- I-94
- Current I-20

To be considered for Admission international students must submit all materials to the Office of the Registrar by these deadlines:

Out of Country
- Summer Semester – April 15
- Fall Semester – June 15
- Spring Semester – November 15

In Country

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

After materials are reviewed and approved, the college issues the Department of Homeland Security Form I-20.

Approximate cost of attendance for one academic year: $36,000. Tuition and fees: $15,815. Books and supplies: $1,460. Medical insurance: $1,640. Housing, living, and personal expenses: $17,085.

Approximate cost of attendance with housing sponsorship: $28,675. Tuition and fees: $15,815. Books and supplies: $1,460. Medical insurance: $1,640. Housing, living, and personal expenses: $9,760.

Additional expense for each dependent: $5,000.

FRCC does not have residence halls, therefore, students are responsible for finding their own housing.

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

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

Special Program Admission

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

Physical Examination and Immunization

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

Denial of Admission

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

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

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

Privacy

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

Student Identification Number

A state law initiated in 2003 requires that each Colorado postsecondary institution assign to each student a unique ID number that shall not be a student's Social Security Number. This number is your Student ID (SID). A Social Security Number is required for Financial Aid and College Opportunity Fund (COF) stipend recipients.

High School and Former College Transcripts

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

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

Student Classification

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

Academic Year

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

Admission Status

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

Residency

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

the residency statutes and is not free to make exceptions to the rules except as specifically permitted by law.

General Qualifications

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

- During the one-year domicile period, the student should comply with all legal obligations of a Colorado resident such as demonstrating proof of voter registration, Colorado income tax payment, Colorado motor vehicle registration, Colorado issued driver's license or ID card, and/or proof of employment.

- Students under the age of 23 (unemancipated minors) may be eligible for in-state tuition if a parent or court-appointed legal guardian has been domiciled and complied with legal obligations in Colorado for one year.

- Students whose parents are not domiciled in Colorado *may also qualify to begin the one-year domiciliary period* if the student is: at least 23 years old, married, or emancipated. Emancipation requires documentation of financial independence and the ability to maintain your own residence and associated expenses in addition to tuition. If you receive financial support from your parents, extended family, friends, or other similar sources, including trusts and loans, you are not considered emancipated.

- There are several amendments to the Tuition Classification Law for certain populations of students including Olympic athletes, military personnel, inmates, recent Colorado high school graduates, GED recipients, etc. Please contact the Tuition Classification Officer at Front Range Community College to determine if you may be in an eligible population.

- FRCC sets a priority deadline for each semester that is typically one week before the start of the fifteen-week semester. Students who meet this priority deadline should know the petition decision before the deadline to drop courses for the fifteen-week semester. However, all students have up to 30 days after the first day of his/her term of admission or enrollment to petition for in-state tuition. The Tuition Classification Officer may request additional documentation as the burden of proof rests upon the petitioner to substantiate the claim of resident for tuition classification purposes. The Tuition Classification Officer notifies the student of the outcome within 30 days of the decision via email and/or standard letter.

Initial Classification

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

Changes in Tuition Classification

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

Correction of Residency Determination Due to an Error

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

Appeal Procedures for Residency and Tuition Classification

Any student who is denied in-state tuition classification after petitioning for in-state tuition may appeal the decision of the Tuition Classification Officer. The student must appeal to the Registrar's Office in writing and provide any additional supporting documentation available to substantiate the claim to in-state tuition classification within 30 days of the denial, but no later than the end of the semester.

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

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

About FRCC

History of Campuses

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

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

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

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

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

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

January 1995: The FRCC Longmont Campus opens, fulfilling a long-standing dream of Longmont residents and the Longmont business community. From 1982 to 1994, FRCC had offered

college classes to Longmont residents at Longmont High School and various other locations.

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

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

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

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

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

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

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

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

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

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

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

March 2013: Westminster Campus students approve a bond fee for parking lot safety improvements, including a new stop light and pedestrian walkways and additional close-in parking, and improvements to the Student Center, including a coffee bar, upgraded gym facilities, quiet study space, and a multipurpose performance space. Larimer Campus students approve a bond fee to contribute to funding $32 million in projects, including a new Integrated Technology Building and renovations to other buildings.

January 2015: Little Bear Peak opens at the Larimer Campus as the first phase of the campus renovation and expansion. Little Bear Peak houses Integrated Technology programs - Automotive Technology, Manufacturing and Energy Technology, and Welding Technology. The Westminster Campus celebrates the improvements to the Student Center. The Student Center houses more student-centered spaces, including a coffee bar, increased lounge space, quiet study rooms, and an upgraded and expanded gym and fitness facility.

August 2015: The South Classroom Building and a new greenhouse open at the Westminster Campus. The South Classroom Building was renovated to become a visual-art center with a ceramics studio, a 3D lab and two 2D labs as well as a general purpose classroom and an outdoor kiln area. The greenhouse has two parts - a hands-on classroom and the greenhouse. A portion of the exterior site will be used as a teaching lab for irrigation systems and landscape construction skills. A full renovation of Redcloud Peak and a renovation of the north wing of Blanca Peak open at the Larimer Campus as the second phase of the campus renovation and expansion. Redcloud Peak was renovated to house the Creative Arts, Design, and Humanities Department. The north wing of Blanca Peak houses Veterinary Technology and Forestry, Wildlife, and Natural Resources. A five-year $1.1 million federal TRIO Student Support Services grant will assist FRCC with providing essential services at the Westminster Campus to a growing population in Colorado of at-risk first-generation students.

July 2016: The Westminster Campus' construction and renovation plan that began with the opening of the Student Services Center in 2012 is declared complete. The last of the projects included upgrades to the Visual and Performing Arts Gallery, faculty offices, renovation of classrooms, construction of a Surgical Technology lab with two mock operating rooms, student lounges, and corridor upgrades.

August 2016: The renovated and expanded Mount Antero opens at the Larimer Campus. The building is a "one-stop" shop for the support services that help make students successful.

July 2017: A five-year $1.2 million federal TRIO Upward Bound grant will provide funding for FRCC staff to serve 60 Westminster High School students each year. The goal is to increase the rate at which participants complete secondary education and enroll in and graduate from institutions of postsecondary education.

August 2017: Renovation to the leased facility on Prospect Road in Fort Collins accommodates four programs: Licensed Practical Nursing (new), Medical Assisting (new), Emergency Medical Services, and a Law Enforcement Academy (new).

October 2017: A five-year, $2.2 million U.S. Department of Education Title III grant will support FRCC's efforts to provide more support to students so more students are successful. The highly competitive program helps eligible higher education institutions expand their capacity to serve low-income students. The award recognizes and supports FRCC's extensive student success efforts that began in 2014.

August 2019: The college opens its new Center for Integrated Manufacturing near the Boulder County Campus in Longmont. This state-of-the art facility is home to FRCC's advanced manufacturing programs: automation & engineering technology, electronics engineering technology, optics technology and precision machining.

September 2019: FRCC's Boulder County Campus completed a major renovation to its student spaces. The remodel to the Classroom Building included a new look for our welcome desk, café, campus store, library, student commons, student life office and campus security office. The project also added a new front patio and revamped outdoor courtyard in the center of the building. In the Administration Building, FRCC renovated two classrooms that now house the college's new geospatial science program—which was the college's very first bachelor's degree offering.

August 2020: The new Health Care Careers Center opens at the Larimer Campus. The two-story, 61,000 square-foot Grays Peak building houses all current and future health care and nursing education programs. The state-of- the-art facility is designed to provide allied health and nursing students a high-tech learning environment with interactive simulators and realistic clinical space. It will allow FRCC's Larimer Campus to continue to provide a highly-qualified workforce to meet local health care needs and to support anticipated job growth in health-related fields.

September 2022: FRCC establishes a taskforce to begin the college's work to become a federally designated Hispanic-Serving Institution. Latinx students now make up about 1/4 of FRCC's student body. Becoming an HSI is an intentional commitment to being a college where Latinx students thrive. This effort ties in directly to our mission, which is to enrich lives through learning—for all of our students equitably.

Accreditation

Institutional Accreditation

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

Higher Learning Commission

230 South LaSalle Street, Suite 7-500

Chicago, IL 60604

1-800-621-7440

www.hlcommission.org

Program Accreditation

All programs in this catalog are approved by the State Board for Community Colleges and Occupational Education (SBCCOE), the Colorado Department of Higher Education (CDHE), the Colorado State Approving Agency for Veterans Education and Training, and the Higher Learning Commission (HLC). In addition to college accreditation, many programs have additional program accreditation, recognition and/or approval by State Departments and/or National Associations. A listing is provided below:

• **Automotive Technology** (p. 79)**: -** Accredited by ASE Education Foundation.

• **Dental Assisting** (p. 42)**:** Commission on Dental Accreditation of the American Dental Association, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and by the United States Department of Education

• **Early Childhood Education** (p. 115): Accredited by the National Association for the Education of Young Children (NAEYC)

• **Emergency Medical Services** (p. 43): Colorado Recognized EMS Education Program by Colorado Department of Public Health and Environment - Emergency Medical Services Division

• **Forestry, Wildlife and Natural Resources** (p. 98):

- Wildlife Technology (p. 100): Accredited by the North American Wildlife Technology Association (NAWTA)

- Forestry Technology (p. 99): Accredited by the Society of American Foresters (SAF)

• **Health Information Technology** (p. 43): Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)

• **Heating, Air Conditioning and Refrigeration** (p. 85): Accredited by the Partnership for Air Conditioning, Heating and Refrigeration Accreditation (PAHRA)

• **Integrative Health** (p. 44): Integrative Health Professions AAS and Integrative Health & Wellness Coaching Certificate are Approved by National Board for Health & Wellness Coaching (NBHWC).

• **Kitchen and Bath Design** (p. 63): Certificate in Interior Design at FRCC is recognized as an Affiliated School by the National Kitchen and Bath Association (NKBA). FRCC is a NKBA Founding School.

• **Nurse Aide** (p. 52): Larimer Campus is an Approved Nurse Aide Education Program by the Colorado State Board of Nursing

• **Nursing** (p. 49): Approved Registered Nursing Education Program by the Colorado State Board of Nursing. The Associate in Nursing Program at FRCC Westminster Campus is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 (404) 975-5000. The most recent accreditation decision made by the ACEN Board of Commissioners for the Associate in Nursing Program is Continuing Accreditation. View public information disclosed by the ACEN regarding this program.
Licensed Practical Nursing: Approved Practical Nursing Education Program by the Colorado State Board of Nursing. The Practical Nursing Education Program at Larimer Campus is approved by the ACEN Board of Commissioners in Initial Accreditation.

• **Nursing Bachelor of Science** (p. 49): Accredited by the Commission on Collegiate Nursing Education (CCNE).

• **Advanced Pharmacy Technician Training** (p. 52) **Certificate**: Accredited by the American Society of Health System Pharmacists (ASHP)

• **Sterile Processing Technology** (p. 53): The CRCST Certification is accredited by both the American National Standards Institute (ANSI) and the National Commission for Certifying Agencies (NCAA).

• **Surgical Technology** (p. 53)**:** Commission on Accreditation of Allied Health Education Programs (CAAHEP)

• **Veterinary Technology** (p. 54): AAS: Accredited by the American Veterinary Medical Association (Committee on Veterinary Technician Education and Activities). Veterinary Assistant Certificate is Approved by the National Association of Veterinary Technicians in America (NAVTA).

Directory/Acknowledgements

We credit FRCC's reputation for excellence to the hard work of our many dedicated faculty and staff in fulfilling our mission every day.

We also acknowledge the professional guidance of the State Board for Colorado Community Colleges and Occupational Education, our Area Advisory Council and our College Leadership.

To see a full list of our dedicated FRCC family, please see our directory.

Credits

The Office of Student and Academic Services produces this catalog

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

PROGRAMS A-Z

Construction Trades*

Construction Fundamentals Certificate (p. 83)
Construction Essentials Certificate (p. 83)
*Offered only with our partnering high schools. Program is not offered on campus or online.

Criminal Justice & Public Safety

Criminal Justice AA Degree (p. 113)

Criminal Justice AAS Degree (p. 113)

Peace Officers Standards & Training Certificate (p. 114)

Cybersecurity - Networking & Virtualization

Cybersecurity AAS Degree (p. 34)

Networking & Virtualization AAS Degree (p. 35)

Windows Server Administration Certificate (p. 36)

Cybersecurity Fundamentals Certificate (p. 36)

Cloud Computing and Virtualization Certificate (p. 37)

Network Infrastructure Certificate (p. 37)

Network Technician Certificate (p. 37)

Linux Server Administration Certificate (p. 37)

Networking Basics Certificate (p. 38)

Dental Hygiene & Assisting

Dental Hygiene AAS Degree (p. 42) **(Coming Soon)**
Dental Assisting Certificate (p. 42)

Early Childhood Teacher Education

Early Childhood Teacher Education AA Degree (p. 115)

Early Childhood Education AAS Degree (p. 115)

Early Childhood Director Certificate (p. 116)

Early Childhood Education for Paraeducators Certificate (p. 117)

Early Childhood Teacher Certificate (p. 117)

Early Childhood Assistant Teacher Certificate (p. 117)

Economics

Economics AA Degree (p. 118)

Electronics Engineering Technology

Electronics Engineering Technology AAS Degree (p. 83)
Basic Electronics Certificate (p. 84)
Electronic Systems & Automation Certificate (p. 84)

Electronics Assembly Certificate (p. 85)

Elementary Teacher Education

Elementary Teacher Education AA Degree (p. 118)

Emergency Medical Technician

Clinical EMT Certificate (p. 43)

Emergency Medical Technician Certificate (p. 43)

Engineering

General Engineering AES Degree (p. 92)

Mechanical Engineering AES Degree
(p. 93) **Civil Engineering AES Degree** (p. 94)

English

English AA Degree (p. 61)

Fermentation Sciences

Fermentation Sciences AS Degree (p. 97)

Forestry, Wildlife & Natural Resources

Natural Resources Technology AAS Degree (p. 98)

Forestry Technology AAS Degree (p. 99)

Wildlife Technology AAS Degree (p. 100)

Natural Resources Certificate (p. 101)

Natural Resources Geographic Information Systems Certificate (p. 101)

Natural Resources Recreation Certificate (p. 101)

Environmental Education Certificate (p. 101)

Forestry Certificate (p. 102) (p. 102)

Wildland Fire Certificate (p. 102)

Wildlife Certificate (p. 102)

French

French AA Degree (p. 62)

Geography

Geography AA Degree (p. 119)

Geology*

Geology AS Degree (p. 105)

General AS Degree

*Please work with your advisor to select the best pathway for you.

Geospatial Science

Geospatial Science BAS Degree (p. 103)

Geospatial Science AAS Degree (p. 104)

Geographic Information Systems Certificate (p. 104)

Foundations of Geographic Information Systems Certificate (p. 105)

Health Information Technology

Health Information Technology AAS Degree (p. 43)

Medical Coding Certificate (p. 44)

Health Sciences

Health Sciences AA Degree (p. 40)

Heating, Ventilation, Air Conditioning, & Refrigeration

Heating, Ventilation, Air Conditioning & Refrigeration AAS Degree (p. 85)

Residential Air Conditioning and Heating Certificate (p. 86)

Light Commercial Air Conditioning and Heating Certificate (p. 86)

General AS Degree

*Please work with your advisor to select the best pathway for you.

Political Science

Political Science AA Degree (p. 122)

Precision Machining Technology

Precision Machining Technology AAS Degree (Coming Soon!) (p. 88)
(p. 88) Precision Machining Technology Certificate (p. 88)

CNC Machining Certificate (p. 88)

Manual Machining Certificate (p. 89)

Psychology

Psychology AA Degree (p. 123)

Psychology AS Degree (p. 124)

Sociology

Sociology AA Degree (p. 125)

Spanish

Spanish AA Degree (p. 75)

Sterile Processing Technology

Sterile Processing Certificate (p. 53)

Surgical Technology

Surgical Technology AAS Degree (p. 53)

Teaching English to Speakers of Other Languages

Teaching English to Speakers of Other Languages - Abroad Certificate (p. 126)

Teaching English to Speakers of Other Languages - K-12 Certificate (p. 126)

Veterinary Technology

Veterinary Technology AAS Degree (p. 54)

Veterinary Assistant Certificate (p. 54)

Welding Technology

Welding Technology AAS Degree (p. 89)

Comprehensive Welding Certificate (p. 90)

Metal Fabrication Certificate (p. 90)

Creative Metalworking Certificate (p. 90)

Shielded Metal Arc Welding Certificate (p. 91)

Gas Metal Arc (MIG) Welding Certificate (p. 91)

Gas Tungsten Arc (TIG) Welding Certificate (p. 91)

Oxyacetylene Welding Certificate (p. 91)

Welding Fundamentals Certificate (p. 92)

ELECTIVE LISTS

Students completing an Associate Degree at FRCC may need to complete elective courses when specified. The Approved Elective List (p. 16) contains courses considered generally transferable. However, a student's major at a four-year college/university may limit what credit will be accepted and applied toward degree requirements at that institution.

Students may choose to complete courses listed as GT "Guaranteed Transfer" to better ensure transferability to a four-year college/university. This GT list (p. 17) is also included below.

APPROVED ELECTIVE LIST

Below are the approved elective courses for all degrees at FRCC unless otherwise specified[1]. While these courses are considered generally transferable, a student's major at a four-year college/university may limit what credit will be accepted and applied toward degree requirements at that institution.

Students may choose to complete courses listed as GT "Guaranteed Transfer" to better ensure transferability to a four-year college/university. These courses are designated in this catalog. A list of gtPathways courses can be found here (p. 17).

The statement "or higher" does not include specialized courses (p. 129).

CATEGORIES & COURSES

Mathematics & Science

Includes GT-MA1 (p. 18); GT-SC1 (p. 18); GT-SC2 (p. 19) and courses below:

- AQT 2008
- ANT 1005, ANT 2315
- AST 1110 or higher (p. 183)
- BIO 1004 or higher (p. 183)
- CHE 1005 or higher (p. 187)
- CSC 1019 or higher
- EGG 1000 (p. 194) or higher (p. 204)
- ENV 1111, ENV 1010
- FER 1001, FER 1002, FER 2001, FER 2003
- GEO 1011, GEO 1012, GEO 1060, GEO 2010
- GEY 1108 or higher (p. 211)
- GIS 1001 or higher (p. 212)
- HLT 1101 or higher (p. 218) {excludes HLT 2008}
- MAT 1220 or higher (p. 235)
- MET 1050
- NRE 1100, NRE 1110, NRE 1021, NRE 2000, NRE 2204, NRE 2205, NRE 2025
- PHY 1105 or higher (p. 254)
- SCI 1055 or higher (p. 256)

Liberal Arts, Communication & Design

Includes GT-AH1 (p. 17); GT-AH2 (p. 17); GT-AH3 (p. 18); GT-AH4 (p. 18) and courses below. Courses in Multimedia, Manufacturing, Drafting & Design[3] are highly dependent of transfer institution and major.

- *Communication*
  - COM 1150 or higher (p. 192), [excludes COM 2300, COM 1250, COM 2220 in SS3 *Human Behavior, Culture, Social Frameworks* and COM 1300 in AH1 *Arts & Expression*]
  - ENG 1021 or higher (p. 207)
  - HIS 2765: CO3

- *Arts & Expression*
  - ART 1001 or higher (p. 178)
  - DAN 1005 or higher (p. 195)[2]
  - MUS 1000 or higher (p. 241)
  - THE 1005 or higher (p. 260)

- *Literature & Humanities*
  - HUM 1003 or higher (p. 220)
  - LIT 1015 or higher (p. 231)

- *Ways of Thinking*
  - PHI 1011 or higher (p. 252)

- *World Languages*
  - ARA 1001 or higher (p. 178)
  - ASL 1101 or higher (p. 182)
  - CHI 1001 or higher (p. 188)
  - FRE 1001 or higher (p. 209)
  - GER 1001 or higher (p. 211)
  - ITA 1001 or higher (p. 229)
  - JPN 1001 or higher (p. 230)
  - RUS 1001 or higher (p. 256)
  - SPA 1001 or higher (p. 258)

- *Interpreter Prep Program*[3]
  - IPP 1021, IPP 1047

- *Multimedia, Manufacturing, Drafting & Design*[3]
  - AEC 1210, AEC 1520, AEC 1600
  - CAD 1100, CAD 1101, CAD 1102, CAD 1110
  - EGT 1101, EGT 2300
  - FLD 2000
  - IND 1101, IND 2201
  - MAC 1000, MAC 1001, MAC 1002, MAC 1010, MAC 1020
  - MGD 1011, MGD 1012, MGD 1017, MGD 1033, MGD 1043, MGD 1064

Social Sciences, Education and Public Service

Includes GT-SS1 (p. 19); GT-SS2 (p. 19); GT-SS3 (p. 19); GT-HI1 (p. 18) and courses below. Courses in Education[3] are highly dependent of transfer institution and major.

- *History*
  - HIS 1110 or higher (p. 214), {excludes HIS 2765: CO3 *Writing About History*}

- *Economic & Political Systems*
  - ECO 1001 or higher (p. 202)
  - PSC 1011 or higher (p. 254)

- *Geography*
  - GEO 1005, GEO 1006, GEO 1065, GEO 2000

- *Human Behavior, Culture, or Social Framework*
  - ANT 1001 or higher (p. 177), {excludes ANT 1005 & ANT 2315: SC1 *Natural & Physical Sciences*}
  - COM 2300, COM 1250, COM 2220 in SS3 *Human Behavior, Culture, Social Frameworks* and COM 1300 AH1

- *Arts & Expression*
  - CRJ 1010 or higher (p. 193)
  - ETH 2000 or higher (p. 208)

- JOU 1005 or higher (p. 230)
- PSY 1001 or higher (p. 255)
- SOC 1001 or higher (p. 257)
- WST 2000 or higher (p. 264)

- Education[3]

- ECE 1011 or higher (p. 200)
- EDU 1011 or higher (p. 202)

Business & Information Technology
Includes no GT pathway courses. Courses in Business & Information Technology[3] are highly dependent of transfer institution and major.

- ACC 1001 or higher (p. 174)
- BUS 1002 or higher (p. 185)
- CIS 1015 or higher (p. 189)
- ENP 1005
- FIN 2010
- HOS 1010, HOS 1041
- MAN 1005 or higher (p. 233)
- MAR 1011 or higher (p. 235)

Military Leadership
Includes no GT pathway courses. Courses in Military Leadership[3] are highly dependent of transfer institution and major.

- AIR 1001 or higher (p. 176)
- ARM 1011 or higher (p. 178)

Outdoor Studies, Physical Education & Wellness
Includes no GT pathway courses. Courses in Outdoor Studies, Physical Education, & Wellness[3] are highly dependent on transfer institution and major.

- IHP 1001, IHP 2001, IHP 2004, IHP 2040, IHP 2060, IHP 2061, IHP 2062, IHP 2063
- HPR 1010, HPR 1017, HPR 1036, or HPR 1045
- HWE 1001 or higher (p. 222)
- OUT 1040 or higher (p. 248)[2]
- PED 1001 or higher (p. 251)[2]

First-Year Experience
Includes no GT pathway courses. Courses in Advancement of Academic Achievement[3] are highly dependent of transfer institution and major.

- AAA 1001 (p. 174)
- AAA 1009 (p. 174)

Notes:

[1]AAS degrees (p. 128) *and AA & AS Degrees with Designation* (p. 129) *have specific electives defined by industry and transfer requirements. Please view these specified programs for elective requirements and work with an advisor or program lead/faculty to learn more.*

[2]Max of three (3) credits for PED, OUT and DAN permitted as approved electives for degree. Guaranteed Transfer (GT) courses such as DAN 1050 are excluded from this credit limitation.

[3]Courses selected from the Education, Business & Information Technology; Military Leadership; Interpreter Prep Program; Multimedia, Manufacturing, Drafting & Design; First-Year Experience; and Outdoor Studies, Physical Education, & Wellness sections are highly dependent on transfer institution and major. Students should work closely with the transfer institution before enrolling in these courses.

GT PATHWAY COURSES

The Colorado Department of Higher Education, in consultation with Colorado's public colleges and universities, has developed a standardized concept of general education and has identified the specific courses to satisfy these general education requirements. The curriculum consists of 31 credit hours of courses across these specific content areas: written communication, mathematics, arts and humanities, history and social & behavioral sciences and natural & physical sciences. Receiving institutions shall apply the 31 credit hours of guaranteed general education courses to a student's general education or major requirements.

GUARANTEED TRANSFER (GT) PATHWAYS GENERAL EDUCATION CURRICULUM

Arts and Expression • Arts GT Courses - AH1
GT-AH1 Courses

ART 1110	Art Appreciation: GT-AH1	3
ART 1111	Art History Ancient to Medieval: GT-AH1	3
ART 1112	Art History Renaissance to 1900: GT-AH1	3
ART 1113	Art History 1900 to Present: GT-AH1	3
COM 1300	Communication & Popular Culture: GT-AH1	3
DAN 1025*	Dance Appreciation: GT-AH1	3
DAN 1050	Dance History: GT-AH1	3
ENG 2021	Creative Writing I: GT-AH1	3
MUS 1020	Music Appreciation: GT-AH1	3
MUS 1021	Music History Medieval - Classical: GT-AH1	3
MUS 1022	Music History Romantic - Present: GT-AH1	3
MUS 1023	Survey of World Music: GT-AH1	3
MUS 1025	History of Jazz: GT-AH1	3
THE 1005	Theatre Appreciation: GT-AH1	3
THE 1008	Theatre Script Analysis: GT-AH1	3
THE 2011	Dev of Theatre Greek-Renaissance: GT-AH1	3
THE 2012	Dev Theatre Restoration - Modern: GT-AH1	3
THE 2015	Playwriting: GT-AH1	3

Literature and Humanities • GT Courses - AH2
GT-AH2 Courses

HUM 1003	Intro to Film Art: GT-AH2	3
HUM 1015	World Mythology: GT-AH2	3
HUM 1021	Humanities: Early Civilization: GT-AH2	3
HUM 1022	Humanities: Medieval-Modern: GT-AH2	3
HUM 1023	Humanities: Modern World: GT-AH2	3
LIT 1015	Intro to Literature I: GT-AH2	3
LIT 2001	World Literature to 1600: GT-AH2	3
LIT 2002	World Literature After 1600: GT-AH2	3
LIT 2005	Race, Ethnicity, and Culture: GT-AH2	3
LIT 2011	American Lit to Civil War: GT-AH2	3
LIT 2012	American Lit After Civil War: GT-AH2	3
LIT 2021	British Literature to 1770: GT-AH2	3

LIT 2022	British Literature Since 1770: GT-AH2	3
LIT 2025	Intro to Shakespeare: GT-AH2	3
LIT 2046	Literature of Women: GT-AH2	3
LIT 2055	Children's Literature: GT-AH2	3
LIT 2058	Latinx Literature: GT-AH2	3
LIT 2059	Survey African American Lit: GT-AH2	3
LIT 2068	Celtic Literature: GT-AH2	3

Ways of Thinking • GT Courses - AH3

GT-AH3 Courses

PHI 1011	Introduction to Philosophy: GT-AH3	3
PHI 1012	Ethics: GT-AH3	3
PHI 1013	Logic: GT-AH3	3
PHI 1014	Comparative Religions: GT-AH3	3
PHI 1015	World Religions - West: GT-AH3	3
PHI 1016	World Religions - East: GT-AH3	3
PHI 2005	Business Ethics: GT-AH3	3
PHI 2013	Symbolic Logic: GT-AH3	3
PHI 2014	Philosophy of Religion: GT-AH3	3
PHI 2018	Environmental Ethics: GT-AH3	3
PHI 2020	Philosophy Death & Dying: GT-AH3	3

World Languages • GT Courses - AH4

GT-AH4 Courses

ASL 2221	American Sign Language IV: GT-AH4	3
ASL 2222	American Sign Language V: GT-AH4	3
FRE 2011	French Language III: GT-AH4	3
FRE 2012	French Language IV: GT-AH4	3
GER 2011	German Language III: GT-AH4	3
GER 2012	German Language IV: GT-AH4	3
ITA 2011	Italian Language III: GT-AH4	3
ITA 2012	Italian Language IV: GT-AH4	3
JPN 2011	Japanese Language III: GT-AH4	3
JPN 2012	Japanese Language IV: GT-AH4	3
RUS 2011	Russian Language III: GT-AH4	3
RUS 2012	Russian Language IV: GT-AH4	3
SPA 2011	Spanish Language III: GT-AH4	3
SPA 2012	Spanish Language IV: GT-AH4	3

Communication • GT Courses - CO1

GT-CO1 Courses

ENG 1031	Technical Writing I: GT-CO1	3
ENG 1021	English Composition I: GT-CO1	3

Communication • GT Courses - CO2

GT-CO2 Courses

ENG 1022	English Composition II: GT-CO2	3

Communication • GT Courses - CO3

GT-CO3 Courses

ENG 2001	English Composition III: GT-CO3	3
HIS 2765	Writing About History: GT-CO3	3

History • GT Courses - HI1

GT-HI1 Courses

HIS 1110	The World: Antiquity-1500: GT-HI1	3
HIS 1120	The World: 1500-Present: GT-HI1	3
HIS 1210	U.S. History to Reconst: GT-HI1	3
HIS 1220	U.S. History Since Civil War: GT-HI1	3
HIS 1310	Western Civ: Antiquity-1650: GT-HI1	3
HIS 1320	Western Civ: 1650-Present: GT-HI1	3
HIS 2000	History of Science and Tech: GT-HI1	3
HIS 2005	Women in World History: GT-HI1	3
HIS 2015	20th Century World History: GT-HI1	3
HIS 2105	Women in U.S. History: GT-HI1	3
HIS 2110	African American History: GT-HI1	3
HIS 2115	American Indian History: GT-HI1	3
HIS 2120	U.S. Foreign Relations History: GT-HI1	3
HIS 2125	American Environmental History: GT-HI1	3
HIS 2130	History of American West: GT-HI1	3
HIS 2135	Colorado History: GT-HI1	3
HIS 2140	Civil War Era American History: GT-HI1	3
HIS 2145	U.S. History Since 1945: GT-HI1	3
HIS 2200	History of Latin America: GT-HI1	3
HIS 2210	History of Mexico: GT-HI1	3
HIS 2300	The Middle Ages: GT-HI1	3
HIS 2310	History Christianity in the World: GT-HI1	3
HIS 2500	History of Islamic Civiliz: GT-HI1	3
HIS 2510	Modern Middle East: GT-HI1	3
HIS 2610	History of Modern China: GT-HI1	3

Mathematics • GT Courses - MA1

GT-MA1 Courses

MAT 1220	Integrated Mathematics I: GT-MA1	3
MAT 1230	Integrated Mathematics II: GT-MA1	3
MAT 1240	Math for Liberal Arts: GT-MA1	4
MAT 1260	Intro to Statistics: GT-MA1	3
MAT 1340	College Algebra: GT-MA1	4
MAT 1400	Survey of Calculus: GT-MA1	4
MAT 1420	College Trigonometry: GT-MA1	3
MAT 1440	Pre-Calculus: GT-MA1	5
MAT 2410	Calculus I: GT-MA1	5
MAT 2420	Calculus II: GT-MA1	5
MAT 2430	Calculus III: GT-MA1	4
MAT 2431	Calculus III/Engineer Applications: GT-MA1	5
MAT 2520	Discrete Mathematics: GT-MA1	4
MAT 1320*	Finite Mathematics: GT-MA1	4
MAT 2561*	Diff Equations/Engineering App. GT-MA1	4
MAT 2560*	Differential Equations: GT-MA1	3

Natural and Physical Sciences • GT Courses - SC1

GT-SC1 Courses

AGY 2040*	Introductory Soil Science: GT-SC1	4
ANT 1005	Biological Anthropology with Laboratory: GT-SC1	4
ANT 2315	Intro Forensic Anthropology w/Lab: GT-SC1	4
AST 1110	Planetary Astronomy w/Lab: GT-SC1	4
AST 1120	Stellar Astronomy w/Lab: GT-SC1	4
BIO 1004	Biology: A Human Approach: GT-SC1	4
BIO 1005	Science of Biology w/Lab: GT-SC1	4
BIO 1111	General College Biology I w/Lab: GT-SC1	5
BIO 1112	General College Biology II w/Lab: GT-SC1	5
BIO 2101	Human Anatomy & Physiology I w/Lab: GT-SC1	4
BIO 2102	Human Anatomy & Physiology II w/Lab: GT-SC1	4
BIO 2104	Microbiology w/Lab: GT-SC1	4
BIO 2108	General College Microbiology w/Lab: GT-SC1	5
BIO 2121	Botany w/Lab: GT-SC1	5
BIO 2124	Genetics: GT-SC1	4

BIO 2120*	General Zoology with Lab: GT-SC1	5
CHE 1005	Chemistry in Context w/Lab: GT-SC1	5
CHE 1011	Intro to Chemistry I w/Lab: GT-SC1	5
CHE 1012	Intro to Chemistry II w/Lab: GT-SC1	5
CHE 1111	General College Chemistry I w/Lab: GT-SC1	5
CHE 1112	General College Chemistry II w/Lab: GT-SC1	5
ENV 1111	Environmental Science w/Lab: GT-SC1	4
GEO 1011	Physical Geography: Landforms w/Lab: GT-SC1	4
GEO 1012	Phys Geo: Weather, Climate, Eco w/Lab: GT-SC1	4
GEY 1111	Physical Geology w/Lab: GT-SC1	4
GEY 1112	Historical Geology w/Lab: GT-SC1	4
GEY 1135	Environmental Geology w/Lab: GT-SC1	4
GEY 1155*	General Oceanography w/Lab: GT-SC1	4
MET 1050	General Meteorology w/Lab: GT-SC1	4
PHY 1105	Conceptual Physics w/Lab: GT-SC1	4
PHY 1107	Energy Science & Tech w/Lab: GT-SC1	4
PHY 1111	Physics: Algebra-Based I w/Lab: GT-SC1	5
PHY 1112	Physics: Algebra-Based II w/Lab: GT-SC1	5
PHY 2111	Physics: Calculus-Based I w/Lab: GT-SC1	5
PHY 2112	Physics: Calculus-Based II w/Lab: GT-SC1	5
SCI 1055	Integrated Science I w/Lab: GT-SC1	4
SCI 1056	Integrated Science II w/Lab: GT-SC1	4

SCI 1055 & SCI 1056 are intended for Early Childhood Education & Elementary Education Students **ONLY**. Students MUST pass BOTH SCI 1055 & SCI 1056 with a "C" or better to satisfy the gtPathways science requirement. Students looking to take these courses should do so understanding that these courses are only guaranteed transferable for students pursuing the following agreements: Early Childhood Teacher Education (p. 129) or Elementary Teacher Education (p. 129) and should seek advisement from the four-year college/university and Front Range Community College advisors before enrolling.

Natural and Physical Sciences • GT Courses - SC2

GT-SC2 Courses

(Lecture Course Without Required Laboratory)

AST 1150*	Astrobiology: GT-SC2	3
AST 1140*	Astronomy Ancient Cultures: GT-SC2	3
AST 1160	Cosmology: GT-SC2	3
BIO 1003*	Principles of Animal Biology	3
BIO 1016*	Introduction to Human Disease	3
ENV 1010	Natural Disasters: GT-SC2	3
GEO 1060	Global Climate Change: GT-SC2	3
GEY 1108	Geology of National Parks: GT-SC2	3
SCI 1105	Science in Society: GT-SC2	3

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

GT-SS1 Courses

AGE 2045*	Agriculture Economics: GT-SS1	3
ECO 1001	Economics of Social Issues: GT-SS1	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
ECO 2011	Gender in the Economy: GT-SS1	3
ECO 2045	Environmental Economics: GT-SS1	3
PSC 2020	Intro to Political Science: GT-SS1	3
PSC 1011	American Government: GT-SS1	3
PSC 1025	American State & Local Govt: GT-SS1	3
PSC 2005	International Relations: GT-SS1	3
PSC 1050	Current Political Issues: GT-SS1	3
PSC 2025	Comparative Government: GT-SS1	3

Geography • GT Courses -SS2

GT-SS2 Courses

GEO 1005	World Regional Geography: GT-SS2	3
GEO 1006	Human Geography: GT-SS2	3

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

GT-SS3 Courses

AGR 2060*	World Interdependence: Population & Food: GT-SS3	3
ANT 1001	Cultural Anthropology: GT-SS3	3
ANT 1004	Archaeology Laboratory: GT-SS3	1
ANT 1006	Physical Anthropology Laboratory: GT-SS3	1
ANT 1003	Introduction to Archaeology: GT-SS3	3
ANT 1208	Archaeology of World Rock Art: GT-SS3	3
ANT 2115	Native Peoples of North America: GT-SS3	3
ANT 2125	Anthropology of Religion: GT-SS3	3
ANT 2130*	Sex, Gender, and Culture: GT-SS3	3
ANT 2550	Medical Anthropology: GT-SS3	3
COM 2300	Intercultural Communication: GT-SS3	3
COM 1250	Interpersonal Communication: GT-SS3	3
COM 2220	Group Communication: GT-SS3	3
CRJ 1010	Intro to Criminal Justice: GT-SS3	3
ETH 2000	Intro to Ethnic Studies: GT-SS3	3
ETH 2015*	Discrimination, Diversity, Difference in US: GT-SS3	3
JOU 1005	Intro to Mass Media: GT-SS3	3
PSY 1001	General Psychology I: GT-SS3	3
PSY 1002	General Psychology II: GT-SS3	3
PSY 2771	Psychology of Personality: GT-SS3	3
PSY 2105	Psychology of Gender: GT-SS3	3
PSY 2107	Human Sexuality: GT-SS3	3
PSY 2221	Social Psychology: GT-SS3	3
PSY 2222	Psychology of Death & Dying: GT-SS3	3
PSY 2440	Human Growth & Development: GT-SS3	3
PSY 2441	Child Development: GT-SS3	3
PSY 2552	Abnormal Psychology: GT-SS3	3
PSY 2331*	Positive Psychology: GT-SS3	3
PSY 2333*	Health Psychology: GT-SS3	3
SOC 1001	Intro to Sociology I: GT-SS3	3
SOC 1002	Intro to Sociology II: GT-SS3	3
SOC 2005	Sociology of Family Dynamics: GT-SS3	3
SOC 2007	Environmental Sociology: GT-SS3	3
SOC 2015	Contemporary Social Problems: GT-SS3	3
SOC 2016	Sociology of Gender: GT-SS3	3
SOC 2018	Sociology of Diversity: GT-SS3	3
SOC 2020	Sociology of Religion: GT-SS3	3
SOC 2031	Sociology of Deviant Behavior: GT-SS3	3
SOC 2037	Sociology of Death & Dying: GT-SS3	3
WST 2000	Intro to Women's Studies: GT-SS3	3
WST 2100	Women & Social Action: GT-SS3	3
WST 2200	Goddesses & Women in Ancient	3

	World: GT-SS3	
WST 2300	Women's Sexuality: GT-SS3	3

Courses not currently offered at Front Range Community College.

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

Written Communication - 6 Credit Hours

2 courses

- Introductory Writing Course (GT-CO1 (p. 18))
  and Intermediate Writing Course (GT-CO2 (p. 18))
  OR
- Intermediate Writing Course (GT-CO2 (p. 18)) and Advanced Writing Course (GT-CO3 (p. 18))

Mathematics - 3 Credit Hours

1 course (or a series of three 1-credit hour courses)

- (GT-MA1 (p. 18))

Arts & Humanities, History and Social & Behavioral Sciences - 15 Credit Hours

Arts & Humanities - 2 courses (minimum 3 credits each)

- Arts and Expression (GT-AH1 (p. 17))
- Literature and Humanities (GT-AH2 (p. 17))
- Ways of Thinking (GT-AH3 (p. 18))
- World Languages (must be Intermediate/200 level) (GT-AH4 (p. 18))
  History -- 1 course (minimum 3 credits)
- (GT-HI1 (p. 18))
  Social & Behavioral Sciences -- 1 course (minimum 3 credits)
- Economic or Political Systems (GT-SS1 (p. 19))
- Geography (GT-SS2 (p. 19))
- Human Behavior, Culture, or Social Frameworks (GT-SS3 (p. 19))
  To reach a minimum of 15 credits, please select 1 additional course (minimum 3 credits) in Arts & Humanities or History or Social & Behavioral Sciences.

Natural & Physical Sciences - 7 Credits Hours

2 courses, one of which must be GT-SC1:

- Course with Required Laboratory (GT-SC1 (p. 18))
- Lecture Course Without Required Laboratory (GT-SC2 (p. 19))

PROGRAM INFORMATION

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 (p. 17) are guaranteed to transfer to Colorado's public four-year institutions. Students may also take classes individually for their enrichment, or career development.

Career and Technical Education (CTE) AAS degree & certificate course requirements are subject to change due to Colorado Community College System mandated renewal cycles and program revisions. These program revisions are necessary to align with course changes in the Colorado Community College System (CCCS) Common Course Numbering System (CCNS) and/or updated state or national accreditation standards specific to program content. A list of these accrediting agencies is available under the FRCC Program Accreditation section (p. 10) in this catalog. The archived PDF version of this catalog will not contain these updates. To verify the most accurate certificate and AAS degree requirements, please review DegreeCheck in the eWOLF Student Dashboard or view your program MAP listed by Career and Academic Community by clicking on the icon on the left.

To learn more about the different types of degrees at FRCC, please see Degree & Elective Information (p. 126) and meet with an advisor to select the best program for you.

Business & Information Technology

Accounting

Accounting AAS Degree (p. 25)

Bookkeeping Certificate (p. 25)

Tax Preparation Certificate (p. 26)

Business

Business AA Degree (p. 26)

Business AAS Degree (p. 27)

Business Logistics AAS Degree (p. 28)

Logistics Certificate (p. 29)

Small Business Ownership Certificate (p. 29)

Foundations of Business Certificate (p. 29)

Foundations of Leadership & Management Certificate (p. 29)

Project Management Certificate (p. 30)

Computer Information Systems

Computer Information Systems AAS Degree (p. 30)

Database Administration AAS Degree (p. 31)

Database Certificate

Applications Specialist Certificate (p. 31)

Computer Science & Programming

Computer Science AS Degree (p. 31)

Programming AAS Degree (p. 33)

Programming Certificate (p. 33)

Web Developer Certificate (p. 34)

Cybersecurity - Networking & Virtualization

Cybersecurity AAS Degree (p. 34)

Networking & Virtualization AAS Degree (p. 35)

Windows Server Administration Certificate (p. 36)

Cybersecurity Fundamentals Certificate (p. 36)

Cloud Computing and Virtualization Certificate (p. 37)

Network Infrastructure Certificate (p. 37)

Network Technician Certificate (p. 37)

Linux Server Administration Certificate (p. 37)

Networking Basics Certificate (p. 38)

Highway Maintenance Management

Highway Maintenance Management AAS Degree (p. 38)

Hospitality

Hospitality Management AA Degree (p. 39)

Hotel & Event Management AAS Degree (p. 39)Fundamentals of Hospitality Certificate (p. 40)

Health Sciences & Wellness

Dental Hygiene & Assisting

Dental Hygiene AAS Degree (p. 42) **(Coming Soon!)**
Dental Assisting Certificate (p. 42)

Emergency Medical Technician

Clinical EMT Certificate (p. 43)

Emergency Medical Technician Certificate (p. 43)

Health Information Technology

Health Information Technology AAS Degree (p. 43)

Medical Coding Certificate (p. 44)

Health Sciences

Health Sciences AA Degree (p. 40)

Integrative Health & Massage Therapy

Integrative Health Professions AAS Degree (p. 45)

Integrative Health Body-Energy AAS Degree (p. 44) **(Coming Soon!)**

Integrative Health & Wellness Coaching Certificate (p. 46)

Reflexology Certificate (p. 46)

Massage Therapy Certificate (p. 47)

Integrative Health Professions Certificate (p. 47)

Yoga Teacher Certificate (p. 48)

AUTOMOTIVE TECHNOLOGY

Automotive Technology AAS Degree (p. 79)

Engine Performance Certificate (p. 80)

Engine Repair Certificate (p. 80)

Automotive Electrical/Electronic Systems Certificate (p. 81)

Automatic Transmission/Transaxle Certificate (p. 81)

Brakes Certificate (p. 81)

General Automotive Maintenance & Repair Certificate (p. 81)

Manual Drivetrain & Axles Certificate (p. 82)

Suspension & Steering Certificate (p. 82)

Automotive Heating & Air Conditioning Certificate (p. 82)

Automotive Services: Comprehensive Technician Certificate **(Coming Soon)**

Automotive Services: Entry-Level Technician Certificate **(Coming Soon)**

CONSTRUCTION TRADES*

Construction Fundamentals Certificate (p. 83)
Construction Essentials Certificate (p. 83)
*****Offered only with our partnering high schools. Program is not offered on campus or online.

ELECTRONICS ENGINEERING TECHNOLOGY

Electronics Engineering Technology AAS Degree (p. 83)
Basic Electronics Certificate (p. 84)
Electronic Systems & Automation Certificate (p. 84)

Electronics Assembly Certificate (p. 85)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION

Heating, Ventilation, Air Conditioning & Refrigeration AAS Degree (p. 85)

Residential Air Conditioning and Heating Certificate (p. 86)

Light Commercial Air Conditioning and Heating Certificate (p. 86)

Commercial Refrigeration Certificate (p. 87)

HVAC/R Fundamentals Certificate (p. 87)

PRECISION MACHINING TECHNOLOGY

Precision Machining Technology AAS Degree (Coming Soon!)
Precision Machining Technology Certificate (p. 88)

CNC Machining Certificate (p. 88)

Manual Machining Certificate (p. 89)

OPTICS TECHNOLOGY

Optics Technology AAS Degree (Coming Soon!)
Optics Technology Certificate (p. 87)
Foundations of Optics Technology Certificate **(Coming Soon!)**

WELDING TECHNOLOGY

Welding Technology AAS Degree (p. 89)

Comprehensive Welding Certificate (p. 90)

Metal Fabrication Certificate (p. 90)

Creative Metalworking Certificate (p. 90)

Shielded Metal Arc Welding Certificate (p. 91)

Gas Metal Arc (MIG) Welding Certificate (p. 91)

Gas Tungsten Arc (TIG) Welding Certificate (p. 91)

Oxyacetylene Welding Certificate (p. 91)

Welding Fundamentals Certificate (p. 92)

Math & Science

Associate of Science - General

Associate of Science Degree

Biology*

Biology AS Degree (p. 95)

General AS Degree

*Please work with your advisor to select the best pathway for you.

Chemistry*

Chemistry AS Degree (p. 96)

General AS Degree

*Please work with your advisor to select the best pathway for you.

Engineering

Associate of Engineering Science in General Engineering (p. 92)
Associate of Engineering Science in Mechanical Engineering (p. 93)
(p. 94) **Associate of Engineering in Civil Engineering** (p. 94)

Fermentation Sciences

Fermentation Sciences AS Degree (p. 97)

Forestry, Wildlife & Natural Resources

Natural Resources Technology AAS Degree (p. 98)

Forestry Technology AAS Degree (p. 99)

Wildlife Technology AAS Degree (p. 100)

Natural Resources Certificate (p. 101)

Natural Resources Geographic Information Systems Certificate (p. 101)

Natural Resources Recreation Certificate (p. 101)

Environmental Education Certificate (p. 101)

Forestry Certificate (p. 102) (p. 102)

Wildland Fire Certificate (p. 102)

Wildlife Certificate (p. 102)

Geospatial Science

Geospatial Science BAS Degree (p. 103)

Geospatial Science AAS Degree (p. 104)

Geographic Information Systems Certificate (p. 104)

Foundations of Geographic Information Systems Certificate (p. 105)

Geography
Geography AA Degree (p. 119)

Geology*
Geology AS Degree (p. 105)

General AS Degree

*Please work with your advisor to select the best pathway for you.

Horticulture & Landscape Technologies
Horticulture & Landscape Technologies AAS Degree (p. 106)

Horticulture Business Management AS Degree (p. 107)

Floral Design Certificate (p. 107)

Horticulture Certificate (p. 108)

Landscape Design Certificate (p. 108)

Landscape Contracting Technician Certificate (p. 108)

Landscape Maintenance Technician Certificate (p. 109)

Greenhouse & Nursery Management Certificate (p. 109)

Irrigation Technician Certificate (p. 110)

Math
Mathematics AS Degree (p. 110)

Physics*
Physics AS Degree (p. 111)

General AS Degree

*Please work with your advisor to select the best pathway for you.

Social Science, Education & Public Service

Associate of Arts - General
Associate of Arts (p. 55)

Anthropology
Anthropology AA Degree (p. 112)

Criminal Justice & Public Safety
Criminal Justice AA Degree (p. 113)

Criminal Justice AAS Degree (p. 113)

Peace Officers Standards & Training Certificate (p. 114)

Early Childhood Teacher Education
Early Childhood Teacher Education AA Degree (p. 115)

Early Childhood Education AAS Degree (p. 115)

Early Childhood Director Certificate (p. 116)

Early Childhood Education for Paraeducators Certificate (p. 117)

Early Childhood Teacher Certificate (p. 117)

Early Childhood Assistant Teacher Certificate (p. 117)

Economics
Economics AA Degree (p. 118)

Elementary Teacher Education
Elementary Teacher Education AA Degree (p. 118)

Geography
Geography AA Degree (p. 119)

History
History AA Degree (p. 120)

Paralegal/Legal Assistant
Paralegal/Legal Assistant AAS Degree (p. 121)

Paralegal/Legal Assistant Certificate (p. 121)

Foundations of Paralegal: Family Law Certificate (p. 122) **(Coming Soon)** (p. 122)

Political Science
Political Science AA Degree (p. 122)

Psychology
Psychology AA Degree (p. 123)

Psychology AS Degree (p. 124)

Sociology
Sociology AA Degree (p. 125)

Teaching English to Speakers of Other Languages
Teaching English to Speakers of Other Languages/Abroad Certificate (p. 126)

Teaching English to Speakers of Other Languages/K-12 Certificate (p. 126)

My Academic Plans - MAPs
My Academic Plans (MAPs) are designed by faculty and displayed in a semester format showing the fastest path to finishing your certificate or degree. While this is the ideal, you can take courses as your schedule permits. Contact an academic advisor regarding your scheduling needs.

In most cases, the courses you need are available on your selected campus. However, there may be times to complete courses online or travel to another FRCC campus. Location availability is indicated at the time of registration.

Our six Career and Academic Communities will help you reach your goal. Choose your community from the list below and explore our programs.

Business & Information Technology (p. 24)

Health Sciences & Wellness (p. 40)

Liberal Arts, Communication & Design (p. 55)

Manufacturing, Automotive & Construction Technology (p. 76)

Math & Science (p. 92)

Social Sciences, Education & Public Service (p. 112)

Business & Information Technology
This Career and Academic Community includes the following programs: Accounting, Business & Business Logistics, Computer Information Systems, Database Administration, Programming,

Computer Networking & Virtualization, Cybersecurity, Highway Maintenance Management, Culinarian & Restaurant Management, and Hotel & Event Management. To learn more about the program click on the program below.

Accounting

ACCOUNTING ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Accounting and enter the workforce. Students explore business and accounting concepts. Some careers may require a Bachelor's degree. Students interested in transferring to Colorado public universities may complete an AA in Business (p. 26). Students will explore financial ratios, business written communications and skills for software programs, presentations, teamwork, and critical thinking. With an AAS degree in Accounting, the student can work in business, industry, government, and other organizations. They will be ready to work effectively under the supervision of controllers, chief accountants, accounting supervisors, certified public accountants, and other professional accountants.

First Semester

ACC 1011	Intro to Financial Accounting	3
BUS 1015	Introduction to Business	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
CIS 1018	Introduction to PC Applications	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
		Subtotal: 15

Second Semester

ACC 1012	Intro to Managerial Accounting	3
ACC 1038	Payroll and Sales Tax	3
MAT 1340 or MAT 1320 or MAT 1400	College Algebra (MAT 1340) or Finite Mathematics (MAT 1320) or Survey of Calculus (MAT 1400) or higher	4
ECO 2001	Principles of Macroeconomics: GT-SS1	3
CIS 1055	Complete Spreadsheets	3
		Subtotal: 16

Third Semester

BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications and Report Writing	3
ACC 1031 or ACC 1032 and ACC 1033	Income Tax (ACC 1031) or Both Tax Help Colorado (ACC 1032) and Tax Help Colorado Practicum (ACC 1033)	3
ACC 1025	Computerized Accounting	3
ELECTIVE	Accounting AAS Degree Electives*	3
		Subtotal: 15

Semester Notes: ACC 1033 is **offered only in the Spring.**

Fourth Semester

MAN 2030 or PHI 2005	Corporate Ethics (MAN 2030) or Business Ethics (PHI 2005)	3
ACC 2011	Intermediate Accounting I	4
ELECTIVE	Accounting AAS Degree Electives*	3
ELECTIVE	Accounting AAS Degree Electives*	3
Internship or Practicum or Capstone	Internship (ACC 2080) or Practicum (ACC 2088) or Tax Help Practicum (ACC 1033) or Capstone (ACC 2089)	1
		Subtotal: 14

Semester Notes: ACC 1033 **is offered only in the Spring.**

Total Credit Hours: 60
Important Program Notes:

Math Requirement: Your selection of a MATH course may depend on whether you intend to transfer to a 4-year institution. Please consider the following:

MAT 1340 College Algebra: GT-MA1**.**
Note: Adams State University, Colorado Mesa University, Colorado State University, Colorado State University - Pueblo, and Fort Lewis College require MAT 1340 College Algebra.
OR
MAT 1320 Finite Mathematics: GT-MA1.
OR
MAT 1400 Survey of Calculus: GT-MA1 **OR** a higher-level Calculus course.
Note: University of Colorado - Colorado Springs and the University of Northern Colorado require MAT 1400 Survey of Calculus.

***Accounting AAS Degree Electives**: ACC 1031, ACC 1032**,** ACC 1033, ACC 2031, ACC 2065, ACC 2068, ACC 2080, ACC 2088, ACC 2089, BUS 2026, MAN 2026, MAR 2016.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Accounting Certificates

BOOKKEEPING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Bookkeeping and enter the workforce. Students explore accounting principles, payroll and sales tax concepts, Excel, and QuickBooks. As part of this program, students have the opportunity to sit for national certification exams in both QuickBooks and bookkeeping. This program provides immediate entry-level career opportunities upon completion and prepares students for career entry into a wide variety of clerical and technical positions that have a recordkeeping or bookkeeping component. Students will be ready to work effectively as bookkeepers under the supervision

of controllers, chief accountants, accounting supervisors, certified public accountants, and other professional accountants.

First Semester

ACC 1011	Intro to Financial Accounting	3
ACC 1025	Computerized Accounting	3
ACC 1038	Payroll and Sales Tax	3
		Subtotal: 9

Second Semester

ACC 1012	Intro to Managerial Accounting	3
CIS 1055	Complete Spreadsheets	3
ACC 2080 or ACC 2088 or ACC 2089	Internship (ACC 2080) or Practicum (ACC 2088) or Capstone (ACC 2089)	1
ELECTIVE	Business Communications (BUS 2017) or Certified Bookkeeper Review (ACC 2068)	3
		Subtotal: 10

Total Credit Hours: 19

TAX PREPARATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two-semester) certificate in Tax Preparation and enter the workforce. Students explore reports and taxation processes for individuals and businesses. The Tax Preparation Certificate prepares students with the practical skills needed to perform income tax preparation for individuals, corporations, estates, and trusts. This program provides entry-level career opportunities upon completion. Careers will allow students to work in business, industry, government, and other organizations.

First Semester

ACC 1011	Intro to Financial Accounting	3
ACC 1031	Income Tax	3
ACC 1032	Tax Help Colorado	2
ACC 1038	Payroll and Sales Tax	3
		Subtotal: 11

Second Semester

ACC 1033	Tax Help Colorado Practicum	1
ACC 2031	Business Taxation	3
BUS 2017 or ACC 2065	Business Communications (BUS 2017) or Review Course Enrolled Agent (ACC 2065)	3
		Subtotal: 7

Total Credit Hours: 18
Important Program Notes:

You **must take ACC 1032 in either Semester 1 or Semester 2**. ACC 1032 is offered at Westminster Campus in Fall semester and ACC 1033 is offered at Westminster Campus in the Spring semester.

Business

BUSINESS ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree and transfer to a university to complete a BA or BS in Business. Careers typically require a bachelor's or master's degree. This degree allows students to pursue a BA or BS degree in areas such as Management, Human Resources, Business Administration, Economics, Marketing, Finance, Accounting and more.

First Semester

ENG 1021	English Composition I: GT-CO1	3
BUS 1015	Introduction to Business	3
COM 1150	Public Speaking	3
MAT 1340 or MAT 1320 or MAT 1400+	College Algebra (MAT 1340) or Finite Math (MAT 1320) or Survey of Calculus (MAT 1400) or Higher-level Calculus Course	4
		Subtotal: 13

Semester Note: Most transfer institutions require College Algebra (MAT 1340) for the GT-MA1 requirement. However, some transfer institutions will accept Finite Math (MAT 1320 (p. 236)) and some require Survey of Calculus (MAT 1400) or a higher-level Calculus. If you don't see the institution you plan to transfer to listed, please discuss with your advisor which Math class to take for the GT-MA1 requirement, and if you need to take any additional Math for your elective credits in semester 4.

Second Semester

ENG 1022	English Composition II: GT-CO2	3
GT- SC1	Any Science (GT-SC1) Course	4
ECO 2002	Principles of Microeconomics: GT-SS1	3
BUS 2016	Legal Environment of Business	3
PHI 2005	Business Ethics: GT-AH3	3
		Subtotal: 16

Third Semester

ACC 1011	Intro to Financial Accounting	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
BUS 2017	Business Communications and Report Writing	3
GT- SC1/2	Any Science (GT-SC1/2) Course	3
GT- AH	Any GT-AH	3
		Subtotal: 15

Semester Note: Faculty recommend students complete ACC 1011 and ACC 1012 for their Accounting sequence. If you have already taken Accounting Principles I (ACC 1021) faculty recommend that you take Accounting Principles II (ACC 1022) for your second Accounting course. If you have already taken both ACC 1021 and ACC 1022, these courses will fulfill the Accounting

requirement and the extra credits will count toward elective credits.

Fourth Semester

BUS 2026	Business Statistics	3
ACC 1012	Intro to Managerial Accounting	3
ELECTIVE	Any Approved Elective List Course	4
ELECTIVE	Any Approved Elective List Course	3
GT- HI1	Any History (GT-HI1) Course	3
		Subtotal: 16

Semester Notes: Faculty recommend students complete ACC 1011 and ACC 1012 for their Accounting sequence. If you have already taken Accounting Principles I (ACC 1021) faculty recommend that you take Accounting Principles II (ACC 1022) for your second Accounting course. If you have already taken both ACC 1021 and ACC 1022, these courses will fulfill the Accounting requirement and the extra credits will count toward elective credits.

Most transfer institutions require College Algebra (MAT 1340) for the GT-MA1 requirement. However, some transfer institutions will accept Finite Math (MAT 1320 (p. 236)) and some require Survey of Calculus (MAT 1400) or a higher-level Calculus. (p. 237.) If you don't see the institution you plan to transfer to listed, please discuss with your advisor which Math class to take for the GT-MA1 requirement, and if you need to take any additional Math for your elective credits in semester 4.

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA) and ECO 2001 and ECO 2002 are the Social & Behavioral Science (GT-SS) required courses. PHI 2005 is required for one of the Arts and Humanities (AH) required courses.

If you take more credits in natural & physical science, accounting, or mathematics than are listed, it will reduce the 7 credits of electives needed.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

BUSINESS ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Business and enter the workforce. Students explore business, accounting, and legal principles. Students can choose electives in a specific field that interests them: accounting, business, computer information systems, computer science, computer networking, computer web, finance, management, and marketing. Students interested in transferring to Colorado public four-year universities may complete an AA in Business (p. 26). Some careers may require a Bachelor's degree. Careers will allow the student to work in business, industry, government, and other organizations.

First Semester

ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
BUS 1015	Introduction to Business	3
CIS 1018	Introduction to PC Applications	3
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
MAT 1340 or MAT 1320 or MAT 1400	College Algebra (MAT 1340) or Finite Math (MAT 1320) or Survey Calculus (MAT 1400) or higher	4
		Subtotal: 16

Semester Note: If you intend to **transfer** to a Colorado public four-year college/university, you should **view the Business AA degree MAP and complete a degree change form**. If you **take COM 1250** for the Communication requirement and **switch to the Business AA**, it **will count as an elective** in the Business AA degree. Whereas **COM 1150 is required for the Business AA** and would **count towards a required course**.

Second Semester

ECO 2002	Principles of Microeconomics: GT-SS1	3
ACC 1011	Intro to Financial Accounting	3
BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications and Report Writing	3
PHI 2005 or MAN 2030	Business Ethics (PHI 2005) or Corp Ethics (MAN 2030)	3
		Subtotal: 15

Semester Note: Faculty **recommend students take ACC 1011**. If you have **already taken ACC 1021** it will **fulfill the ACC requirement** and the extra credit will **count towards elective credits**.

If you **take MAN 2030** for the Ethics requirement and **switch to the Business AA**, it **may count as an elective** in the Business AA degree. Whereas **PHI 2005 is required** for the Business AA and would **count towards a required course**.

Third Semester

BUS 2026	Business Statistics	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
MAN 2026	Principles of Management	3
MAR 2016	Principles of Marketing	3
ACC 1012 or MAN 2025 or BUS 1016	Intro Managerial Accounting (ACC 1012) or Managerial Finance (MAN 2025) or Personal Finance (BUS 1016)	3
		Subtotal: 15

Semester Note: Upon **completion** of BUS 1015, ACC 1011, BUS 2017, and BUS 2016, MAN 2016, MAN 2026, MAR 1055, or MAR 2016, you **should apply for the Foundations of Business Certificate** (p. 29).

Fourth Semester

BUS 2081 or BUS 2089	Internship (BUS 2081) or Capstone (BUS 2089)	2
ELECTIVE	Any Business or Management Course	3
ELECTIVE	Any Marketing Course	3

COMPUTER ELECTIVE	Any Computer Technology Elective from CIS, CWB, CNG or MGD Course	3
ELECTIVE	Internship (BUS 2081/2082, ACC 2080, MAN 2080, MAR 2080) or Any Approved Elective List Course	3
		Subtotal: 14

Semester Note: Upon **completion** of BUS 2017, MAN 2024, and MAN 2026, you **should apply for the Foundations of Leadership & Management Certificate** (p. 29)e (p. 29).

Upon **completion** of MAN 2041, MAN 2043, and CIS 2002, you **should apply for the Project Management Certificate** (p. 30).

Upon **completion** of BUS 1015, ACC 1021, BUS 2017, and BUS 2016, MAN 2016, MAN 2026, MAR 1055, or MAR 2016, you **should apply for the Foundations of Business Certificate** (p. 29).

Upon **completion** of MAN 2025, BUS 1002 or MAN 2016 or MGD 2068, BUS 2016 or BUS 2018, 3 credits of MAR electives and 3 credits of Computer electives, you **should apply for the Small Business Ownership Certificate** (p. 29).

Total Credit Hours: 60
Important Program Notes:

You **must enroll in BUS 2081 or BUS 2089** in your final semester.

This degree is designed for students wanting to complete a two-year AAS Degree in Business and enter the workforce.

If you **intend to transfer to a Colorado public four-year college/university**, you should **view the Business AA degree MAP** (p. 26)**.**

If you take ACC 1021 for the Accounting requirement, you **will exceed 60 credits by 1 credit**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

BUSINESS LOGISTICS ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
Program is designed for students wanting to complete a two-year AAS Degree in Business Logistics and enter the workforce. Students explore business logistics management. While earning this A.A.S. degree, students can also earn the Business Logistics certificate. In addition to an overview of core business, management, and marketing classes, students receive a comprehensive understanding of distribution, warehousing, purchasing and transportation.

First Semester

ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
BUS 1015	Introduction to Business	3
MAN 1005	Logistics Management	3
MAT 1340 or MAT 1320 or MAT 1400	College Algebra (MAT 1340) or Finite Math (MAT 1320) or Survey Calculus (MAT 1400) or higher	4
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
		Subtotal: 16

Second Semester

ELECTIVE	CIS 1018/1035/1045/1055	3
ACC 1011	Intro to Financial Accounting	3
BUS 2017	Business Communications and Report Writing	3
GIS 1001 or GIS 1031	Intro to GIS (1001) or Global Positioning Sys for GIS (1031)	3
		Subtotal: 12

Semester Note: Faculty recommend students **take ACC 1011**. If you have **already taken ACC 1021** it **will fulfill the ACC requirement**.

Third Semester

ECO 2002	Principles of Microeconomics: GT-SS1	3
BUS 2001	Business Logistics Optimization	3
BUS 2016	Legal Environment of Business	3
BUS 2026	Business Statistics	3
MAN 2026	Principles of Management	3
		Subtotal: 15

Fourth Semester

BUS 2002	Purchase and Supply Logistics	3
BUS 2018	Legal Environment of Business II	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
ETHICS	Business Ethics (PHI 2005) or Corp Ethics (MAN 2030)	3
BUS 2081 or BUS 2089	Internship (2081) or Capstone (2089)	2
MAR 2016	Principles of Marketing	3
		Subtotal: 17

Semester Note: Upon completion of BUS 2001, BUS 2002, BUS 2017, BUS 2018, and MAN 1005, you **should apply for the Logistics Certificate** (p. 29)**.**

If you **take MAN 2030** for the Ethics requirement and **switch to the Business AA**, it **may count as an elective in the Business AA degree**. Whereas **PHI 2005 is required for the Business AA** and **would count towards a required course**.

Total Credit Hours: 60
Important Program Notes:

This degree is designed for students wanting to complete a two-year AAS degree in Business Logistics and enter the workforce. If you **are planning to transfer to a Colorado public four-year college/university**, you **should view the Business AA degree MAP** (p. 26)**. It is very important to work with your Pathways Advisor** to develop the best academic plan for where you are starting and where you are hoping to transfer.

If you take ACC 1021 for the Accounting requirement, **you will exceed 60 credits by 1 credit**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Business Certificates

LOGISTICS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Business Logistics and enter the workforce. Students explore business logistics management. This certificate program gives students a comprehensive understanding of distribution, warehousing, purchasing and transportation. Warehousing addresses the storage and staging of materials for their ultimate need and end use. Purchasing addresses the associated costs of materials in conjunction with and interrelated with transportation, distribution and warehousing. This certificate provides career opportunities with warehousing, distribution, purchasing and transportation companies upon completion.

First Semester

MAN 1005	Logistics Management	3
BUS 2017	Business Communications and Report Writing	3
BUS 2001	Business Logistics Optimization	3
BUS 2002	Purchase and Supply Logistics	3
BUS 2018	Legal Environment of Business II	3
	Subtotal:	**15**

Total Credit Hours: 15

SMALL BUSINESS OWNERSHIP CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Small Business Ownership and start or operate a business. Students explore small business management, finance and marketing concepts. This certificate prepares students for the entrepreneurial challenge of starting, operating and marketing a business effectively. This program includes additional elective classes in the following areas based on your interests: marketing, employee management, financial management, business support and looks at career options.

First Semester

MAN 2025	Managerial Finance	3
BUS 1002 or MAN 2016 or MGD 2068	Entrepreneurial Operations (BUS 1002) or Small Business Management (MAN 2016) or Business for Creatives (MGD 2068)	3
MAR 1055 or MAR 2016 or MAR 2020	Social Media Marketing in Business (MAR 1055) or Principles of Marketing (MAR 2016) or Principles of Advertising (MAR 2020)	3
BUS 2016 or BUS 2018	Legal Environment Business (BUS 2016) or Legal Environment Business II (BUS 2018)	3
COMPUTER ELECTIVE	Any Computer Technology Elective from CIS, CWB, CNG or MGD Course	3
	Subtotal:	**15**

Total Credit Hours: 15

FOUNDATIONS OF BUSINESS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Foundations of Business and enter the workforce. Students explore business, management, and marketing concepts. This certificate program prepares students to perform marketing, administration, or support functions in organizations related to promotion, sales, public relations, retailing, or advertising operations. This certificate provides immediate entry-level career opportunities upon completion.

First Semester

BUS 1015	Introduction to Business	3
ACC 1011	Intro to Financial Accounting	3
BUS 2017	Business Communications and Report Writing	3
ELECTIVE	BUS 2016, MAN 1028/2016/2026, or MAR 1055/2016	3
	Subtotal:	**12**

Total Credit Hours: 12

FOUNDATIONS OF LEADERSHIP & MANAGEMENT CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Foundations of Leadership & Management and enter the workforce. Students explore proven business leadership principles. The certificate program is designed for individuals who seek to develop and improve their business management skills. This certificate provides immediate entry-level career opportunities upon completion.

First Semester		
BUS 2017	Business Communications and Report Writing	3
MAN 2024	Leadership	3
MAN 2026	Principles of Management	3
		Subtotal: 9

Total Credit Hours: 9

PROJECT MANAGEMENT CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Project Management and enter the workforce. Students explore all aspects of project management planning. This program introduces the tools and skills used to develop and implement project management plans used in various industries. Upon completion this certificate provides career opportunities in the biotech, construction, information systems, marketing, telecommunications, engineering, and manufacturing industries.

First Semester		
MAN 2041	Project Management in Organizations	3
MAN 2043	Project Management in Action	3
CIS 2002	Automated Project Management	3
		Subtotal: 9

Total Credit Hours: 9

Computer Information Systems

COMPUTER INFORMATION SYSTEMS ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Computer Information Systems and enter the workforce. Students explore computer information systems, networking and computer sciences. Consult with program faculty to create an individualized CIS degree to meet the student's needs. Depending on the student's focus, they could qualify for a career as an entry-level programmer, web developer, or database administrator. Some careers may require a Bachelor's degree.

First Semester		
REQUIRED	CIS 1018/1045/1055	3
ELECTIVE	Any Emphasis Course*	3
ELECTIVE	Any Computer Emphasis Course**	3
ELECTIVE	Any Computer Emphasis Course**	3
MATH	Introduction to Statistics (MAT 1260) or Higher	3
		Subtotal: 15

Semester Note: Upon completion of CIS 1018, CIS 1035, CIS 1045, and CIS 1055, you **should apply for the Applications Specialist Certificate** (p. 31)**.**

Upon completion of CIS 1045, CIS 2040, CIS 2043, and CIS 2046 or CSC 2052, you **should apply for the Database Certificate.**

Second Semester		
CNG 2001	Linux Configuration: (OS)	3
ELECTIVE	Any Emphasis Course*	3
ELECTIVE	Any Computer Emphasis Course**	3
ELECTIVE	Any Computer Emphasis Course**	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
		Subtotal: 15

Semester Note: Upon completion of CIS 1045, CIS 2043, CSC 1019, CWB 1010, CWB 2005, CWB 2006 or CWB 2008, MGD 1041 or CWB 1030, and 3 elective credits (**Select one** course from MGD , CIS, CNG, or CWB), you **should apply for the Web Developer Certificate** (p. 34)**.**
Upon completion of CIS 1045, CSC 1060, and select any three CSC courses, you **should apply for the Programming Certificate** (p. 33)**.**

Third Semester		
ELECTIVE	Any Computer Emphasis Course**	3
ELECTIVE	Any Computer Emphasis Course**	3
ELECTIVE	Any Computer Emphasis Course**	3
ELECTIVE	Any Emphasis Course*	3
GEN EDU	Any Approved Elective List Course	3
		Subtotal: 15

Fourth Semester		
ELECTIVE	Any Computer Emphasis Course**	3
ELECTIVE	Any Computer Emphasis Course**	3
ELECTIVE	Any Emphasis Course*	3
GEN EDU	Any Approved Elective List Course	3
GEN EDU	Any Approved Elective List Course	3
		Subtotal: 15

Total Credit Hours: 60
Important Program Notes:

***Any Emphasis Course:** You **must select 12 credits** from any of the following areas of study: Accounting (ACC (p. 174)), Business (BUS (p. 185)), Computer Information Systems (CIS (p. 189)), Computer Networking (CNG (p. 190)), Computer Web-Based (CWB (p. 195)), Computer Science (CSC (p. 194)), Economics (ECO) (p. 202), Finance (FIN (p. 209)), Management (MAN (p. 233)), Marketing (MAR (p. 235)), and Multimedia Graphic Design (MGD (p. 237)), or MAT 2410 or higher.

****Any Computer Emphasis Course:** You **must select 27 credits** from any of the following areas of study: Computer Information Systems (CIS (p. 189)), Computer Networking (CNG (p. 190)), Computer Web-Based (CWB (p. 195)), or Computer Science (CSC (p. 194)).

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

DATABASE ADMINISTRATION ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Database Administration and enter the workforce. Students explore database functions, computer information systems, networking and computer sciences. Students will learn about SQL, database design, technical support, database administration practices for efficiency and security, and server maintenance. Career paths include an entry-level database administrator in various sizes of businesses, corporations or public institutions. Some careers may require a Bachelor's degree. Although some courses may transfer, this AAS degree program is designed for students to enter the workforce.

First Semester

CIS 1015	Introduction to Computer Information Systems	3
CIS 1018	Introduction to PC Applications	3

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Database and enter the workforce. Students explore database functions, computer information systems, networking and computer sciences. Career paths include entry-level positions in a business environment that requires an understanding of Structured Query Language (SQL), database design skills, and database administrative tasks.

First Semester

CIS 1045	Intro to Desktop Database	3
CIS 2040	Database Design and Development	3
CIS 2043	Introduction to SQL	3
ELECTIVE	Oracle Database Admin I (CIS 2046) or Database Program/VB (CSC 2052)	3

Subtotal: 12

Total Credit Hours: 12

Important Program Notes: *You **must have 12 credits** to complete the certificate. You **should not exceed 14 credits**. You **may want to check with your advisor** to monitor your completion progress.*

APPLICATIONS SPECIALIST CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Applications Specialist and enter the workforce. Students explore a wide range of industry standard business applications. This certificate program prepares students for entry-level employment positions as data entry and data processing operators using most major types of business applications including word processing, spreadsheets, databases, and presentation graphics.

First Semester

CIS 1018	Introduction to PC Applications	3
CIS 1035	Complete Word Processing	3
CIS 1045	Intro to Desktop Database	3
CIS 1055	Complete Spreadsheets	3

Subtotal: 12

Total Credit Hours: 12

Computer Science

COMPUTER SCIENCE ASSOCIATE OF SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students transferring to a four-year university to complete their Bachelor of Science (BS) or Bachelor of Arts (BA) in Computer Science. Students explore programming and computer sciences. Students will learn about writing and testing code as well as programming such as C++, Java, or other programming languages. Career paths may vary but include software engineering and development positions in various sizes of businesses, corporations or public institutions. The AS degree in Computer Science prepares students to complete the second half of a BS or BA in Computer Science with both breadth and depth of knowledge of math and science preparing them for transfer. Students receive an Associate of Science (AS) degree at the completion of this program. The Associate of Science (AS) degree prepares students to complete the second half of a Bachelor of Science Degree at a four-year university.

First Semester

MAT 2410	Calculus I: GT-MA1	5
ENG 1021	English Composition I: GT-CO1	3
CSC 1060	Computer Science I: (Language)	4
GT- AH	PHI 1013 or Any GT-AH Course	3

Subtotal: 15

Semester Notes: Additional coursework **might be required** to meet prerequisite requirements for Calculus I (MAT 2410). Pre-requisite courses **may apply toward** elective credit hours.

ENG 1031 (GT-CO1) **OR** ENG 1022 (GT-CO2) **are required** for **Colorado School of Mines**.

CSC 1060 **must be selected** in consultation with Front Range Community College Pathway Advisors to ensure the course taken is in the preferred programming language. CSC 1060 and CSC 1061 **need to be taken** in the same computer language. Additional courses such as CSC 1019 or MAT 2410 may be helpful for you to **successfully complete** CSC 1060. These courses **may apply toward** elective credit hours depending on your intended transfer institution.

Second Semester

MAT 2420	Calculus II: GT-MA1	5
ENG 1022	English Composition II: GT-CO2	3
CSC 1061	Computer Science II: (Language)	4
GT- SS	ECO 2002 or Any GT-SS Course	3

Subtotal: 15

Semester Notes: Calculus II (MAT 2420) and **Discrete Structures** (CSC 2065) **are required for most CSC programs** at most four-year institutions. All four-year institutions **will accept both Calculus II (MAT 2420) and Discrete Structures (CSC 2065)** as either requirements or electives. Please **work with your pathways advisor and academic advisor** at the intended transfer institution for guidance. If you take other courses instead of MAT 2420 and CSC 2065, a graduation exception **will be required for you to earn an AS Degree in Computer Science.**

ENG 1031 (GT-CO1) **OR** ENG 1022 (GT-CO2) **are required** for **Colorado School of Mines**.

CSC 1061 **must be selected** in consultation with Front Range Community College Pathway Advisors to ensure the course taken is in the preferred programming language. CSC 1060 and CSC 1061 **need to be taken** in the same computer language.

Third Semester

CSC 2065	Discrete Structures	4
ELECTIVE	MAT 2430/2431/2540 or CSC/MAT Elective Course*	3
CSC 2025	Computer Arch/Assembly Language	4
GT- SC1	PHY 1111/2111, CHE 1111, BIO 1111, GEY 1111, or Any GT-SC1	4

Subtotal: 15

Semester Notes: Calculus II (MAT 2420) and **Discrete Structures** (CSC 2065) **are required for most CSC programs** at most four-year institutions. All four-year institutions **will accept both Calculus II (MAT 2420) and Discrete Structures (CSC 2065)** as either requirements or electives. Please **work with your pathways advisor and academic advisor** at the intended transfer institution for guidance. If you take other courses instead of MAT 2420 and CSC 2065, a graduation exception **will be required for you to earn an AS Degree in Computer Science.**

***MAT 2430/MAT 2431/MAT 2540 or CSC/MAT Elective courses:** Calculus III (MAT 2430 or MAT 2431, Linear Algebra (MAT 2540 or MAT 2562), or one of the following CSC courses: CSC 2030, CSC 2033, CSC 2034, CSC 2036 CSC 2040, or CSC 2041,

Calculus III (MAT 2430 or MAT 2431) **is required by Colorado School of Mines**. Linear Algebra (MAT 2540) **is required by University of Colorado-Boulder**. C++ Programming (CSC 2034) **is required by Colorado State University.**

CSC 2025 and CSC 2065 **are required per this AS degree** but **transfer as free electives** to **Colorado School of Mines**.

If you **take more credits in mathematics and science** than are listed, it **will reduce the 6 credits of electives needed**.

Fourth Semester

GT- SC1/2	PHY 1112/2112, CHE 1112, BIO 1112 or Any GT-SC1/2	3
ELECTIVE	CSC 2034 or Any Approved Elective List Course	3
GT- HI1	HIS 2015 or Any GT-HI1 Course	3
GT- AH	PHI 1012/2018 or Any GT-AH Course	3
GT- SS	ECO 2001 or Any GT-SS Course	3

Subtotal: 15

Semester Notes: If you **take more credits in mathematics and science** than are listed, it **will reduce the 6 credits of electives needed**.

Total Credit Hours: 60

Important Program Notes: Additional coursework **might be required** to meet prerequisite requirements for Calculus I (MAT 2410). Prerequisite courses **may apply toward** elective credit hours.

The Computer Science Faculty **recommend you take your math courses in consecutive semesters (without taking a semester off, except possibly summer)**. The math in these courses build heavily on each other and **taking courses in consecutive semesters increases skill retention.**

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** any GT-CO1 course plus any GT-CO2 course **OR** any GT-CO2 course plus any GT-CO3 course. **Faculty recommended:** ENG 1021 (GT-CO1) **and** ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) **and** a gtPathways-approved CO3 course (GT-CO3). ENG 1031 (GT-CO1) **OR** ENG 1022 (GT-CO2) **are required** for **Colorado School of Mines**.

Per the Statewide Transfer Articulation Agreement (STAA), **select from** GT-SC1 **and** GT-SC2 courses with at least one GT-SC1 course. GT-SC1 and GT-SC2 courses in sequence (same discipline) **are recommended** (and may be required depending on the receiving institution). Courses **must be selected** in consultation with your Front Range Community College Pathway Advisor as well as from the intended transfer institution, if known. **Select a minimum of seven credits from GT-SC1** and **GT-SC1/2.** Additional credits in this area will be applied toward electives. If you are planning to transfer to **Colorado School of Mines**, **select two courses** from PHY 2111, PHY 2112, and CHE 1111.

FRCC requires CSC 2065 per this AS degree. CSC 2065 is a required course for students planning to transfer to **Colorado State University, University of Colorado-Boulder, University of Colorado-Denver, and University of Northern Colorado.** For Colorado School of Mines, students are advised to use any remaining free elective credits to take CHE 1111 or PHY 2112 (CSC 2065 will be accepted in transfer but the other courses are preferred). You **should consult** your Front Range Community College Pathway Advisor as well as an academic advisor at the intended transfer institution for guidance. If these credits are not required for the major at a receiving 4-year institution, they **will be applied** to the Bachelor's degree as elective credit toward graduation. If you are planning to not take CSC 2065 and take a different course, you **will need to apply for a**

graduation exception. **Please check** with the receiving institution to determine in which way these courses will be applied.

If you **take more credits in mathematics and science** than are listed, it **will reduce the 6 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

PROGRAMMING ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Programming and enter the workforce. Students explore programming, database functions, computer information systems, networking and computer sciences. Students will learn about writing and testing code as well as programming languages such as C++, Java, Python, or other programming languages. Career paths include an entry-level programmer position in various sizes of businesses, corporations, or public institutions. Some careers may require a Bachelor's degree. Although some courses may transfer, this AAS degree program is designed for students to enter the workforce.

First Semester

CSC 1019	Introduction to Programming	3
MATH	Introduction to Statistics (MAT 1260) or Higher	3
CIS 1018	Introduction to PC Applications	3
ELECTIVE	CIS 1015, Any CIS/CSC/CWB Course or CNG 1020/1024	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
		Subtotal: 15

Semester Note: College Algebra (MAT 1340) or higher is preferred if you intend to transfer for a Bachelor's degree.

Second Semester

CIS 1045	Intro to Desktop Database	3
CSC 1060	Computer Science I: (Language)	4
ELECTIVE	Any CIS/CWB/CSC Course, MAT 1340 or higher, CNG 1020 or CNG 1024	3
GEN EDU	PHI 1013/2013, or Any GT Pathways course	3
GEN EDU	Any GT Pathways Course	3
		Subtotal: 16

Semester Note: CSC 1060 and CSC 1061 **need to be taken in the same computer language**. Students should **not take more than 2 programming courses in a semester**.

Third Semester

CSC 1061	Computer Science II: (Language)	4
CNG 2001	Linux Configuration: (OS)	3
COMP SCI	Any Computer Science (CSC) Course	3
ELECTIVE	CIS 2043 or Any CIS/CWB/CSC Course, MAT 1340 or higher, CNG 1020 or CNG 1024	3
ELECTIVE	Any CIS/CWB/CSC Course, MAT 1340 or higher, CNG 1020 or CNG 1024	3
		Subtotal: 16

Semester Note: Upon completion of CIS 1045, CSC 1060, and select any three CSC courses, you **should apply for the Programming Certificate** (p. 33)**.**

CSC 1060 and CSC 1061 **need to be taken in the same computer language**. Students should **not take more than 2 programming courses in a semester**. (CSC 2065 is **not considered a programming course**).

Fourth Semester

COMP SCI	Any Computer Science (CSC) Course	3
COMP SCI	Any Computer Science (CSC) Course	3
ELECTIVE	Any CIS/CWB/CSC Course, MAT 1340 or higher, CNG 1020 or CNG 1024	4
GEN EDU	Any GT Pathways Course	3
		Subtotal: 13

Semester Note: Students should **not take more than 2 programming courses in a semester**. (CSC 2065 is **not considered a programming course**).

Total Credit Hours: 60
Important Program Notes:

You **must complete a minimum of 9 credits of electives in computer science**. If you **take more credits in computer science than listed (9 credits)**, it **will reduce the 16 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

PROGRAMMING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two or three semester) Certificate in Programming and enter the workforce. Students explore programming, databases, and computer sciences. This certificate program prepares students for entry-level employment positions in a business environment that requires programming languages such as C++, Java, Python, or other programming languages. It includes courses in a combination of computer information systems as well as computer science. The best job placement has been with students who already have a degree in any field.

First Semester

CIS 1045	Intro to Desktop Database	3

CSC 1060	Computer Science I: (Language)	4
COMP SCI	Any Computer Science (CSC) Course	3
		Subtotal: 10

Semester Note: CSC 1060 and CSC 1061 **must be taken in the same computer language**. Students **should not take more than 2 programming courses in a semester**. CSC 2065 is **not considered** a programming course.

Second Semester

CSC 1061	Computer Science II: (Language)	4
COMP SCI	Any Computer Science (CSC) Course	3
COMP SCI	Any Computer Science (CSC) Course	3
		Subtotal: 10

Semester Note: CSC 1060 and CSC 1061 **must be taken in the same computer language**. Students **should not take more than 2 programming courses in a semester**. CSC 2065 is **not considered** a programming course.

Total Credit Hours: 20
Important Program Notes:

A **minimum of 2 programming languages are required**, 3 are preferred.

You **must complete a minimum of 9 credits** of Computer Science (CSC) courses at the 2000 level to **complete this certificate**.

CSC 2065 and CSC 2025 **may be taken** but are **primarily for transfer students**. Learning more languages will better prepare a student for the workforce.

WEB DEVELOPER CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Web Developer and enter the workforce. Students explore web developer techniques, computer information systems, and web page design. This certificate program prepares students for entry-level careers that require skills for web development including PL/SQL, Javascript, PHP, Adobe Photoshop, HTML, cascading stylesheets, DHTML, JavaScripts, and CGI forms.

First Semester

CIS 1045	Intro to Desktop Database	3
CIS 2043	Introduction to SQL	3
CSC 1019	Introduction to Programming	3
CWB 1010	Introduction to Web Authoring	3
		Subtotal: 12

Second Semester

CWB 2005	Client-Side Scripting: (Software)	3
ELECTIVE	Any MGD/CIS/CNG/CSC/CWB Course	3
CWB 2006 or CWB 2008	Server-Side Scripting (2006) or Web App Dev. (2008)	3
ELECTIVE	Web Editing Tools (CWB 1030) or Web Design I (MGD 1041)	3
		Subtotal: 12

Total Credit Hours: 24

Cybersecurity

CYBERSECURITY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Cybersecurity and enter the workforce. Students explore cloud and network security management. This AAS degree provides a comprehensive overview of network security, computer forensics, and communication security including remote access, e-mail, the web, directory and file transfer, and wireless data. Students also learn cryptography basics and operational/organizational security as it relates to physical security, disaster recovery, and business continuity. Cloud and virtualization cover the technical skills required to install, configure and/or manage cloud infrastructure. Students completing this training will be prepared for multiple industry certifications including the CompTIA Security+, CompTIA Cloud+, and CompTIA Cloud Essentials. Some careers may require a Bachelor's degree. Although some courses may transfer, this AAS degree program is designed for students to enter the workforce.

First Semester

CIS 1018	Introduction to PC Applications	3
CNG 1020	A+ Certification Preparation	4
CNG 1024	Networking I: Network +	3
CNG 1032	Network Security Fundamentals	3
MATH	College Algebra (MAT 1340) or Higher	3
		Subtotal: 16

Second Semester

CNG 1025	Networking II: Network +	3
CNG 2012	Configuring Windows Server	4
CNG 1033	Firewalls/Network Security	3
CNG 1036	Guide to IT Disaster Recovery	3
ELECTIVE	Intro to Cloud (CNG 1042) or Linux Config: OS (CNG 2001)	0*
		Subtotal: 13

Semester Note: You **must take eight credits of CNG Electives.**
*****If you intend to take three 3-credit electives (CNG 1042/CNG 2001, CNG 2002/CNG 2040, and CNG 2003/CNG 2041), you **will complete this degree with 61 credits** and **need to take CNG 1042/CNG 2001 this semester.**

If you desire to complete a **Linux certificate** you will need to complete **CNG 2001** this semester. If you desire to complete a **Cloud Computing & Virtualization certificate**, you will need to complete **CNG 1042** this semester. If you are **not taking CNG 1042 or CNG 2001,** you **may want to take either an English or**

approved elective course this semester to lighten your semester load in Semester 3.

Upon completion of CNG 1020, CNG 1024, CNG 1032, CNG 1025, CNG 1033, CNG 1036, and CNG 2012, you **should apply for the Cybersecurity Fundamentals Certificate** (p. 36)**.**

Third Semester

CSC 1019	Introduction to Programming	3
CNG 2056	Vulnerability Assessment I	3
ELECTIVE	CNG 2002/2013/2030/2040	4
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
GEN EDU	Any Approved Elective Course	3
		Subtotal: 16

Fourth Semester

CNG 2057	Network Defense & Counter Measures	3
CNG 2058	Digital Forensics	4
CNG 2059	Enterprise Security	4
ELECTIVE	CNG 2003/2014/2031/2041/2043	4
		Subtotal: 15

Semester Note: Upon completion of CNG 1020, CNG 1024, CNG 1032, CNG 2012, CNG 2013, CSC 1019, and CNG 2014, you **should apply for the Windows Server Administration Certificate** (p. 36)**.**

Upon completion of CNG 1020, CNG 1024, CNG 1032, CNG 1042, CNG 2001 or CNG 2012, CNG 2040 and CNG 2041 or CNG 2043, you **should apply for the Cloud Computing and Virtualization Certificate** (p. 37)**.**

Total Credit Hours: 60
Important Program Notes:

To fulfill Cybersecurity AAS degree requirements, you **must successfully complete a minimum of eight credits of Cybersecurity AAS Degree electives*.**

***Cybersecurity AAS Degree electives:** CNG 1042, CNG 2001, CNG 2002, CNG 2003, CNG 2013, CNG 2014, CNG 2030, CNG 2031, CNG 2040, CNG 2041, or CNG 2043.

To complete this degree with 60 credits, you must **take CNG 2013 and CNG 2014** as your electives. You may prefer to **take three of the following three-credit courses to fulfill your Cybersecurity AAS Degree electives**: CNG 1042, CNG 2001, CNG 2002, CNG 2003, CNG 2040, CNG 2041, or CNG 2043. You should complete an elective in semester 2, CNG 1042 or CNG 2001 is preferred. If you take three of these electives listed, you **will complete the degree with 61 credits.** If you complete CNG 2030 and CNG 2031, you **will complete this degree with 62 credits.**

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

NETWORKING & VIRTUALIZATION ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Networking & Virtualization and enter the workforce. Students explore network operating system management. This degree prepares students for positions in network administration and infrastructure, including installing, configuring and troubleshooting networking hardware such as wireless equipment, switches and routers. Students are introduced to the concepts of installing, configuring, and managing multiple operating systems, and will gain the knowledge and skills to configure, administer and secure data, users, and services using multiple servers. Cloud and virtualization cover the technical skills required to install, configure and/or manage cloud infrastructure. Students will be exposed to equipment from multiple networking vendors and will be prepared for multiple industry certifications such as the core Microsoft Certified Professional examinations or the CompTIA A+, CompTIA Network+, CompTIA Cloud+, and CompTIA Cloud Essentials, or the CISCO CCNA certifications. Some careers may require a Bachelor's degree. Although some courses may transfer, this AAS degree program is designed for students to enter the workforce.

First Semester

CIS 1018	Introduction to PC Applications	3
CNG 1020	A+ Certification Preparation	4
CNG 1024	Networking I: Network +	3
CNG 1032	Network Security Fundamentals	3
MATH	College Algebra (MAT 1340) or Higher	3
		Subtotal: 16

Semester Note: Upon completion of CNG 1020, CNG 1024, and CNG 1032, you **should apply for the Networking Basics Certificate** (p. 38)**.**

Second Semester

CNG 1025	Networking II: Network +	3
CNG 2012	Configuring Windows Server	4
CNG 1033	Firewalls/Network Security	3
CNG 1042	Intro to Cloud Computing	3
CNG 2001	Linux Configuration: (OS)	3
		Subtotal: 16

Semester Note: Upon completion of CNG 1020, CNG 1024, CNG 1032, CNG 2012, and CNG 1025, you **should apply for the Network Technician Certificate** (p. 37)**.**

Third Semester

CSC 1019	Introduction to Programming	3
ELECTIVE	CNG 2030/2002	5
ELECTIVE	CNG 2013 if selecting CNG 2002 above	0*
ELECTIVE	CNG 2040/2002/2013	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
		Subtotal: 14

Semester Note: Complete 8-10 credits from CNG electives this semester. The **Westminster** campus offers **CNG 2030 and CNG 2040**. The **Larimer** campus offers CNG 2030, CNG 2040, CNG 2002 and CNG 2013. Select electives based on interest area of Linux, Windows and/or Virtualization pathways.

Fourth Semester

ELECTIVE	CNG 2031/2003	5

ELECTIVE	CNG 2014 if selecting CNG 2003 above	0*
ELECTIVE	CNG 2043/2041/2003/2014	3
ELECTIVE	CNG 1036/2015 if selecting CNG 2043 above	3
GEN EDU	Any Approved Elective Course	3

Subtotal: 14

Semester Note: If you are pursuing the Linux, Windows & Virtualization pathway, you **will complete CNG 2014 as your final elective. You will not** need to **complete** the **elective** listed as **CNG 1036, CNG 2015 or CNG 2043.**

Upon completion of CNG 1024, CNG 1032, CNG 2030, CNG 1025, CNG 1033, and CNG 2031, you **should apply for the** (p. 37)**Network Infrastructure Certificate** (p. 37)**.**

Upon completion of CNG 2001, CSC 1019, CNG 2002, and CNG 2003, you **should apply for the Linux Server Administration Certificate** (p. 37)**.**

Total Credit Hours: 60
Important Program Notes:

To fulfill Networking and Virtualization AAS degree requirements, you **must complete** a minimum of 19 Networking and Visualization AAS degree elective credits.

Networking and Visualization AAS Degree electives: CNG 1036, CNG 2002, CNG 2003, CNG 2013, CNG 2014, CNG 2015, CNG 2030, CNG 2031, CNG 2040, CNG 2041, **or** CNG 2043.

*To complete this degree with 60 credits, you **must take CNG 2030, CNG 2031, and three of the following three-credit Networking and Virtualization AAS Degree electives:** CNG 1036, CNG 2002, CNG 2003, CNG 2015, CNG 2040, CNG 2041, **or** CNG 2043. You can **complete this degree with 61 credits by taking** CNG 2013, CNG 2014, and four of the three-credit courses listed above. You can **complete this degree with 62 credits** by completing all seven of the three-credit courses listed above or completing CNG 2030, CNG 2031, CNG 2013, CNG 2014, and one of the three-credit courses listed above. Please **work with your advisor** to select courses available at your preferred campus location and that best fit your educational needs.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Cybersecurity and Cloud Computing Certificates

WINDOWS SERVER ADMINISTRATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one- year (three-semester) Certificate in Windows Server Administration and enter the workforce. Students explore network administration principles. Students are introduced to the concepts of installing, configuring, and managing multiple operating systems and servers. This program prepares students for career senior roles as network administrators and for the core Microsoft Certified Professional examinations leading to the MCSA and MCSE.

First Semester

CNG 1020	A+ Certification Preparation	4
CNG 1024	Networking I: Network +	3
CNG 1032	Network Security Fundamentals	3
CNG 2012	Configuring Windows Server	4

Subtotal: 14

Semester Note: Upon completion of CNG 1020, CNG 1024, and CNG 1032, you **should apply for the Networking Basics Certificate** (p. 38)**.**

Second Semester

CNG 2013	Administering Windows Server	4
CSC 1019	Introduction to Programming	3

Subtotal: 7

Third Semester

CNG 2014	Adv Windows Server Admin	4

Subtotal: 4

Total Credit Hours: 25

CYBERSECURITY FUNDAMENTALS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Cybersecurity Fundamentals and enter the workforce. Students explore network security. This certificate program provides a comprehensive overview of network security, including general security, remote access, email, the web, directory and file transfer, and wireless data. Students will learn about common network attacks, computer forensics, cryptography, disaster recovery, and business continuity. This certificate program prepares students for entry-level employment and gives working professionals advancement opportunities in the computer networking field.

First Semester

CNG 1020	A+ Certification Preparation	4
CNG 1024	Networking I: Network +	3
CNG 1032	Network Security Fundamentals	3

Subtotal: 10

Semester Note: Upon completion of CNG 1020, CNG 1024, and CNG 1032, you **should apply for the Networking Basics Certificate** (p. 38)**.**

Second Semester

CNG 1025	Networking II: Network +	3
CNG 1033	Firewalls/Network Security	3
CNG 1036	Guide to IT Disaster Recovery	3

CNG 2012	Configuring Windows Server	4
		Subtotal: 13

Total Credit Hours: 23

CLOUD COMPUTING AND VIRTUALIZATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Cloud Computing & Virtualization and enter the workforce. Students explore cloud infrastructure and virtualization technologies. This certificate program prepares students for entry-level employment working with cloud and virtualization technologies that are being broadly adopted and implemented in organizations of all types and sizes. This program provides students with the technical skills required to install, configure, and/or manage cloud infrastructure.

First Semester

CNG 1020	A+ Certification Preparation	4
CNG 1024	Networking I: Network +	3
CNG 1032	Network Security Fundamentals	3
CNG 1042	Intro to Cloud Computing	3
		Subtotal: 13

Semester Note: Upon completion of CNG 1020, CNG 1024, and CNG 1032, you **should apply for the Networking Basics Certificate** (p. 38)**.**

Second Semester

CNG 2001 or CNG 2012	Linux Configuration (2001) or Configuring Windows Server (2012)	3
CNG 2040	Virtual Environment Admin	3
CNG 2041 or CNG 2043	Info. Storage Mgmt. (2041) or Cloud Security & Cyber Law (2043)	3
		Subtotal: 9

Total Credit Hours: 22

NETWORK INFRASTRUCTURE CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Network Infrastructure and enter the workforce. Students will be prepared for careers installing, configuring, and troubleshooting networking hardware such as wireless equipment, switches, and routers. Students will be exposed to equipment from multiple networking vendors, and will be prepared to take the entry level CISCO Certifications.

First Semester

CNG 1024	Networking I: Network +	3
CNG 1032	Network Security Fundamentals	3
CNG 2030	Fast Track CCNA 1 and 2	5
		Subtotal: 11

Second Semester

CNG 1025	Networking II: Network +	3
CNG 1033	Firewalls/Network Security	3
CNG 2031	Fast Track CCNA 3 and 4	5
		Subtotal: 11

Total Credit Hours: 22

NETWORK TECHNICIAN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Network Technician and enter the workforce. Students explore the skills and role of a network technician. This certificate provides students the basic concepts and skills needed as a career network technician in any network environment or on a Microsoft system. Students will be prepared for industry certifications, such as the Microsoft Technology Associate (MTA).

First Semester

CNG 1020	A+ Certification Preparation	4
CNG 1024	Networking I: Network +	3
CNG 1032	Network Security Fundamentals	3
CNG 2012	Configuring Windows Server	4
		Subtotal: 14

Semester Note: Upon completion of CNG 1020, CNG 1024, and CNG 1032, you **should apply for the Networking Basics Certificate** (p. 38)**.**

Second Semester

CNG 1025	Networking II: Network +	3
		Subtotal: 3

Total Credit Hours: 17

LINUX SERVER ADMINISTRATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a three-semester Certificate in Linux Server Administration and enter the workforce. Students explore the Linux operating system. This certificate introduces the student to the concepts of

installing, configuring, and managing the Linux operating system and provides students with the knowledge and skills to configure, administer and secure data, users, and services in a Linux server environment.

First Semester		
CNG 2001	Linux Configuration: (OS)	3
CSC 1019	Introduction to Programming	3
		Subtotal: 6
Second Semester		
CNG 2002	Unix/Linux Server Administration	3
		Subtotal: 3
Third Semester		
CNG 2003	Advanced Linux Server Administration	3
		Subtotal: 3

Total Credit Hours: 12

NETWORKING BASICS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester certificate in Networking Basics and enter the workforce. Students explore network help-desk technology. This program prepares students for entry-level network help-desk career positions. Students are trained in the competencies found in multiple industry certification exams including CompTIA A+ and CompTIA Networking+, MTA Security Fundamentals and MTA Networking Fundamentals certification exams.

First Semester		
CNG 1020	A+ Certification Preparation	4
CNG 1024	Networking I: Network +	3
CNG 1032	Network Security Fundamentals	3
		Subtotal: 10

Total Credit Hours: 10

Highway Maintenance Management

HIGHWAY MAINTENANCE MANAGEMENT ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Highway Maintenance Management and enter the workforce. Students explore leadership and management skills in the highway maintenance industry. This AAS degree prepares highway maintenance employees to pursue careers among leaders in Highway Maintenance Management in federal, state, county, and municipal public works agencies and also private sector industry partner organizations. Students develop a firm grasp of highway maintenance while learning leadership and management strategies to increase employee effectiveness through developing skills in project management, planning, supervision, communication, and team building.

First Semester		
HWY 1001	Highway Maintenance Management	3
MAN 1028	Human Relations in Organizations	3
MAN 2026	Principles of Management	3
MATH	Career Mathematics (MAT 1140) or Higher	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
		Subtotal: 15
Second Semester		
MAN 1016	Principles of Supervision	3
MAN 2024	Leadership	3
MAN 2041	Project Management in Organizations	3
CIS 1018 or CIS 1055	Intro to PC Apps (1018) or Complete Spreadsheets (1055)	3
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
		Subtotal: 15
Third Semester		
MAN 2030	Corporate Ethics & Social Resp	3
COM 2300 or PSC 1025	Intercultural Communication (COM 2300) or American State & Local Government (PSC 1025)	3
HWY 1000	Highway Maintenance & Operations Safety	1
HWY 1005	Traffic Control	2
HWY 1010	Highway Asset Management	1
HWY 1015	Pavement Preservation	2
HWY 2055	Highway Maintenance Leadership	4
		Subtotal: 16
Fourth Semester		
ELECTIVE	HWY 2010 or Any Highway AAS Degree Elective*	3
ELECTIVE	HWY 2010 or Any Highway AAS Degree Elective*	3
ELECTIVE	HWY 2010 or Any Highway AAS Degree Elective*	3
ELECTIVE	HWY 2010 or Any Highway AAS Degree Elective*	3
HWY 2088 or HWY 2089	Practicum (HWY 2088) or Internship (HWY 2089)	2
		Subtotal: 14

Total Credit Hours: 60

Important Program Notes:

***Highway AAS Elective include:** HWY 2010, DRV 1038, HEQ 1040, HWY 1080, HWY 1081, HWY 1082, HWY 1083, HWY 1084, HWY 2080, HWY 2081, HWY 2083, HWY 2083, HWY 2084, ACC 1001, ACC 1011, BUS 2017, BUS 2026, MAN 2025, or MAN 2016.

You **will need 12 credits** of electives to complete the program.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Hospitality

HOSPITALITY MANAGEMENT ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree and transfer to Colorado State University to complete a BS in Hospitality Management. Hospitality Management careers often require a bachelor's degree. This program introduces students to foodservice, lodging, event planning, nutrition, and business coursework. The hospitality industry encompasses careers in restaurants, hotels, resorts, spas, event venues, catering, breweries and wineries, bed and breakfast inns, ski areas, business and industry dining venues, hospitals, correctional facilities, and military facilities in the United States and around the world. Examples of career positions include, but are not limited to restaurant managers, caterers, event planners, wedding planners, banquet managers, hotel sales and marketing, hotel guest operations, hospitality real estate acquisition, hotel managers, food writing and media, brewery hospitality operations, commercial wine and liquor sales, chefs, purchasing agents, conference coordinators, guest service agents, tourist attraction managers, spa operations managers, housekeeping managers, timeshare sales and marketing, bed and breakfast owner/managers, travel agents, school food service managers, hospitality food and equipment sales representatives, health inspectors, hospital food service managers, food importers, and country club managers.

First Semester

HOS 1010	Introduction to Hospitality	3
HOS 2051	Hotel Operations	3
HWE 1050	Human Nutrition	3
CUA 1001 or	Food Safety & Sanitation (CUA 1001)	2
ELECTIVE	or Any Approved Hospitality Management AA Degree Elective*	
ELECTIVE	Any Approved Hospitality Management AA Degree Elective*	3

Subtotal: 14

Second Semester

PHI 2005	Business Ethics: GT-AH3	3
COM 1150	Public Speaking	3
ENG 1021	English Composition I: GT-CO1	3
ELECTIVE	Any Approved Hospitality Management AA Degree Elective*	3
ELECTIVE	Any Approved Hospitality Management AA Degree Elective*	3

Subtotal: 15

Third Semester

GT- AH1/2/4	Any Arts & Humanities (GT-AH1, AH2, or AH4) Course	3
ENG 1022	English Composition II: GT-CO2	3
GT- SC1/2	Any Science (GT-SC1 or GT-SC2) Course	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
MATH	College Algebra (MAT 1340) or Math for Liberal Arts (MAT 1240)	3

Subtotal: 15

Note: Students **must complete either** College Algebra (MAT 1340) **OR** Mathematics for Liberal Arts (MAT 1240) **AND** Macroeconomics (ECO 2001).

Fourth Semester

CHOICE	General Psychology I (PSY 1001) or Intro to Sociology (SOC 1001)	3
CHE 1005	Chemistry in Context w/Lab: GT-SC1	5
ECO 2001	Principles of Macroeconomics: GT-SS1	3
GT- HI1	Any History (GT-HI1) Course	3
ELECTIVE	Any Approved Hospitality Management AA Degree Elective*	2

Subtotal: 16

Total Credit Hours: 60
Important Program Notes:

***Hospitality Management Electives for the Associate of Arts Degree** include: ACC 1011, BUS 2016, BUS 2017, HOS 1041, HOS 2080, CUA 1001, and/or HOS 2055.

If you **take more credits in mathematics and science** than are listed, it **will reduce the 13 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree**.** If receiving financial aid, you **should only take courses and credits as required for this degree.** Check with your advisor to monitor your completion progress.

HOTEL & EVENT MANAGEMENT ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Hotel & Event Management and enter the workforce. Students explore all management facets of the hotel and event industries. The degree is designed to prepare students with the necessary skills and knowledge for entry level careers in the various classifications of hotels, meetings, conventions, expositions, and special events. Students will participate in one industry related internship. During these courses, students receive applied experiences in both service and operational areas of the hotel and event planning industries. Students take a nationally recognized test from the Education Foundation of the National Restaurant Association, if passed with a score of 75% or more students receive the ServSafe® Food Protection Manager Certification.

First Semester		
CUA 1001	Food Safety and Sanitation	2
HOS 1040	Front Office Procedures	2
HOS 1010	Introduction to Hospitality	3
HOS 1020	Service Management	3
HOS 1031	Planning for Special Events	3
HOS 2051	Hotel Operations	3
		Subtotal: 16
Second Semester		
HOS 1048	Intro to Food and Beverage	3
HOS 2042	Hotel Sales and Marketing	3
HOS 1041	Convention Management	3
ELECTIVE	Any BUS, CIS, MAN, or MAR Course	3
MATH	Career Mathematics (MAT 1140) or Higher	3
		Subtotal: 15
Third Semester		
HOS 2021 or ACC 1011	Basic Hotel & Rest Accounting (HOS 2021) or Intro to Financial Accounting (ACC 1011)	3
HOS 2055	Hospitality HR Management	3
PHI 2005	Business Ethics: GT-AH3	3
ELECTIVE	Any BUS, CIS, MAN, or MAR Course	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
		Subtotal: 15
Fourth Semester		
COM 1150	Public Speaking	3
HWE 1050	Human Nutrition	3
ELECTIVE	Any BUS, CIS, MAN, or MAR Course	3
ELECTIVE	Any BUS, CIS, MAN, or MAR Course	3
HOS 2080 or HOS 2089	Internship (HOS 2080) or Work Experience (HOS 2089)	2
		Subtotal: 14

Semester Note: For Internship (HOS 2080), you **must obtain Program Director approval to register**. It is offered every semester at LC as a hybrid and requires 90 hours in an approved internship setting.

Total Credit Hours: 60
Important Program Notes:

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

FUNDAMENTALS OF HOSPITALITY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-semester Fundamentals of Hospitality certificate and enter the workforce. Students explore fundamental management facets of the hotel and event industries. The certificate is designed to prepare students with the necessary skills and knowledge for entry-level career opportunities in the various classifications of hotels, meetings, conventions, expositions, and special events. Students take a nationally recognized test from the Education Foundation of the National Restaurant Association, if passed with a score of 75% or more students receive the ServSafe® Food Protection Manager Certification.

First Semester		
CUA 1001	Food Safety and Sanitation	2
HOS 1040	Front Office Procedures	2
HOS 1010	Introduction to Hospitality	3
HOS 1020	Service Management	3
HOS 1031	Planning for Special Events	3
HOS 2051	Hotel Operations	3
		Subtotal: 16

Total Credit Hours: 16

Health Sciences and Wellness

This Career and Academic Community includes the following programs: Dental Assisting, Emergency Medical Technician, Health Information Technology, Integrative Health Professions, Massage Therapy, Medical Assisting, Medical Office & Billing Specialist, Nursing, Nurse Aide, Patient Care Technician, Phlebotomy, Pharmacy Technician, Sterile Processing, Surgical Technology, and Veterinary Technology. To learn more about the program click on the program below.

ASSOCIATE OF ARTS IN HEALTH SCIENCES

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete the first two years of a bachelor's degree at Front Range Community College and transfer to a university to pursue a BA degree. The Associate of Arts (AA) Degree in Health Sciences provides students with both breadth and depth of knowledge in Health Sciences, Liberal Arts, as well as Social and Behavioral Sciences that prepares them for transfer into a bachelor degree program at a four-year college or university. Careers typically require a bachelor's or master's degree. Students may tailor this Associate of Arts (AA) Degree in Health Sciences to prepare for specific transfer options in a variety of health science pathways such as nutrition, public health, or human services.

First Semester		
ENG 1021	English Composition I: GT-CO1	3
PSY 2440	Human Growth & Development: GT-SS3	3
GT- SC1	Any Science (GT-SC1) Course, A&P I w/Lab (BIO 2101) is recommended	4
NUTRITION	Dietary Nutrition (HPR 1010) or Human Nutrition (HWE 1050)	1
GT- SC1/2	Any Science (GT-SC1) or (GT-SC2) Course, Microbiology w/Lab (BIO	4

	2104) is recommended	

Subtotal: 15

Semester Note: The following semester 1 courses satisfy prerequisite coursework required to submit an application for program entry into the Nursing AAS degree program: English Composition I: CO1 (ENG 1021), Human Growth & Development: SS3 (PSY 2440), Human Anatomy & Physiology I w/Lab: SC1 (BIO 2101), Either Dietary Nutrition (HPR 1010) **or** Human Nutrition (HWE 1050), and Microbiology w/Lab: SC1 (BIO 2104).

If you complete **Dietary Nutrition** (HPR 1010) in semester 1, you will **also** need to complete the two additional credits of electives displayed in semester 4. If you complete **Human Nutrition** (HWE 1050) in semester 1, you will **not** complete the two additional credits of electives displayed in semester 4 of this MAP.

You may complete the Human Anatomy & Physiology I (BIO 2101) & Microbiology (BIO 2104) Option as listed in this map or start with General College Biology (BIO 1111). Please meet with an advisor to learn more about these options. If you start with BIO 1111 in semester 1, please follow the notes for the General Biology Option listed in each semester.

General College Biology Option: If you take General College Biology I (BIO 1111) in semester 1 instead of Human Anatomy & Physiology I (BIO 2101), you should also take the GT-SS course in semester 1 instead of Microbiology (BIO 2104). This will allow you to take Human Anatomy & Physiology I (BIO 2101) and Microbiology (BIO 2104) in semester 2.

Second Semester

ELECTIVE	Any Approved Elective List Course, A&P II w/Lab (BIO 2102) is recommended	4
ENG 1022	English Composition II: GT-CO2	3
GT- AH	Any Arts & Humanities (GT-AH) Course, PHI 1012 and LIT 2005 are recommended	3
GT- SS	Any Social & Behavioral Sciences (GT-SS), ANT 2550, PSY 2222, or ETH 2000 are recommended	3
MATH	Any GT-MA1, Intro to Statistics (MAT 1260) is recommended	3

Subtotal: 16

Semester Note: GT-AH courses must be completed from two different categories: (GT-AH1, GT-AH2, GT-AH3, GT-AH4).

General College Biology Option: If you completed General College Biology I (BIO 1111) and the GT-SS course in semester 1 instead of Human Anatomy & Physiology (BIO 2101) and Microbiology (BIO 2104), you will take Human Anatomy & Physiology I (BIO 2101) and Microbiology (BIO 2104) this semester, semester 2 instead of the Elective (BIO 2102) and the GT-SS course. If this is the case, you will only take 14 credits this semester and take your GT-MA1 course, Intro to Statistics (MAT 1260) recommended, next semester in semester 3. Completion of the courses BIO 2101 and BIO 2104 are necessary to satisfy the prerequisite coursework required to submit an application for program entry into the Nursing AAS degree program.

Third Semester

GT- AH	Any Arts & Humanities (GT-AH) Course, PHI 1012 and LIT 2005 are recommended	3
GT- HI1	Any History (GT-HI1) Course	3
CHOICE	Student Choice of any GT-AH, GT-SS or GT-HI	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3

Subtotal: 15

Semester Note: GT-AH courses must be completed from two different categories: (GT-AH1, GT-AH2, GT-AH3, GT-AH4).

University Health Science related majors may prefer an additional GT-SS or GT-HI course to be selected as your student choice. Please meet with a pathways advisor to learn more.

General College Biology Option: If you completed General College Biology I (BIO 1111) and the GT-SS course in semester 1 and Human Anatomy & Physiology I (BIO 2101) and Microbiology (BIO 2104) in semester 2, you will now take Human Anatomy & Physiology II and your GT-MA1 course, Intro to Statistics (MAT 1260) recommended, this semester, in semester 3 instead of electives. You will need to complete your communication course requirement and remaining electives in semester 4 to meet the 60 credit degree requirement.

Fourth Semester

GEN EDU	COM 1150/1250/2300	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	2

Subtotal: 14

Semester Note: General College Biology Option: If you completed General College Biology I (BIO 1111) and the GT-SS course in semester 1, Human Anatomy & Physiology I (BIO 2101) and Microbiology (BIO 2104) in semester 2, and Human Anatomy & Physiology II (BIO 2102) and GT-MA1, Intro to Statistics (MAT 1260) recommended, in semester 3, you will need to complete your communication course requirement and remaining electives in semester 4 to meet the 60 credit degree requirement.

Total Credit Hours: 60
Important Program Notes:

The following courses satisfy prerequisite coursework required to submit an application for program entry into the Nursing AAS degree program: English Composition I: CO1 (ENG 1021), Human Growth & Development: SS3 (PSY 2440), Human Anatomy & Physiology I w/Lab: SC1 (BIO 2101), Either Dietary Nutrition (HPR 1010) **or** Human Nutrition (HWE 1050), and Microbiology w/Lab: SC1 (BIO 2104).

You may complete the Human Anatomy & Physiology I (BIO 2101) & Microbiology (BIO 2104) Option as listed in this map or start with General College Biology (BIO 1111). Please meet with an advisor to learn more about these options. If you start with BIO 1111 in semester 1, please follow the notes listed for the **General College Biology Option** listed in each semester.

Credits may vary depending on prior semester completion.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

ASSOCIATE OF SCIENCE IN NUTRITION AND DIETETICS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a master's degree at Front Range Community College and transfer to Metropolitan State University-Denver to complete the final three years to earn a M.S. in Nutrition & Dietetics. Starting in 2024 students who want to pursue the Registered Dietitian Nutritionist (RD/RDN) professional credential will be required to have a M.S. degree. This plan requires students to finish three years of undergraduate college coursework with the remaining two years focused on graduate college coursework – A "3+2 Plan". At the successful completion of this program, students are awarded an Associate of Science in Nutrition and Dietetics from FRCC. Students may continue this pathway and earn two degrees from MSU Denver – a Bachelor of Science in Nutrition and Dietetics and a Master of Science in Nutrition and Dietetics. The M.S. degree in Nutrition and Dietetics at MSU Denver can be obtained in 5 years by starting this pathway and continuing on an accelerated track. Nutrition and dietetics offer an exciting career path with a variety of opportunities in healthcare and wellness. Students are encouraged to meet with their FRCC academic advisor and the Health and Wellness Program Lead to ensure you are on the right path and to have your questions answered. FRCC and MSU Denver advising teams will work together to answer your questions and ensure you feel supported on this journey.

First Semester

ENG 1021	English Composition I: GT-CO1	3
BIO 1111	General College Biology I w/Lab: GT-SC1	5
PSY 1001	General Psychology I: GT-SS3	3
HWE 1050	Human Nutrition	3
ELECTIVE	Any Approved Elective List or Medical Terminology Course	2
	Subtotal:	**16**

Semester Note: You **must select six (6) credits from** Approved Elective List (p. 16) and/or from Medical Terminology courses. Recommended courses are listed in Important Program Notes.

Second Semester

ENG 1022	English Composition II: GT-CO2	3
BIO 2101	Human Anatomy & Physiology I w/Lab: GT-SC1	4
PSY 2440	Human Growth & Development: GT-SS3	3
BIO 2104	Microbiology w/Lab: GT-SC1	4
	Subtotal:	**14**

Third Semester

BIO 2102	Human Anatomy & Physiology II w/Lab: GT-SC1	4
MAT 1260	Intro to Statistics: GT-MA1	3
GT- AH	Any Arts & Humanities (GT-AH) Course, LIT 2005 is recommended	3
GT- HI1	Any History (GT-HI1) Course	3
GT- AH	Any Arts & Humanities (GT-AH) Course, ART 1111/1112 or MUS 1025/1023 are recommended	3
	Subtotal:	**16**

Semester Note: GT-AH courses must be completed from two different categories: (GT-AH1, GT-AH2, GT-AH3, GT-AH4).

Fourth Semester

CHE 1011 or CHE 1111	Introduction to Chemistry I w/Lab (CHE 1011) or General Chemistry I w/Lab (CHE 1111)	5
COM 1150	Public Speaking	3
MAT 1340	College Algebra: GT-MA1	4
ELECTIVE	Any Approved Elective List or Medical Terminology Course	4
	Subtotal:	**16**

Semester Note: You **must select six (6) credits from** Approved Elective List (p. 16) and/or from Medical Terminology courses. Recommended courses are listed in Important Program Notes.

Total Credit Hours: 62
Important Program Notes:

A.S. Nutrition & Dietetics Electives: You **must select six (6) credits** from Approved Elective List (p. 16) and/or Medical Terminology courses. Recommended HWE (p. 222), HPR (p. 220), & IHP (p. 223) courses include: HWE 1051: Nutrition of Pregnancy (1), HWE 1052: Infant Nutrition (1), HWE 1053: Toddler/Preschool Nutrition (1), HWE 1060: Weight loss (1), HWE 1061: Fitness and Wellness (2), HWE 1064: Weight Management and Exercise (2), HWE 1066: Health & Wellness for the Elderly (3); HWE 2060: Exercise, Nutrition & Body Composition (3), HPR 1038: Intro to Medical Terminology (1) or HPR 1045: Medical Record Terminology (2), and IHP 2040: Holistic Nutrition: Digestive Wellness.

Credits may vary depending on prior semester completion.

You **must complete a minimum of 62 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

DENTAL ASSISTING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Dental Assisting and enter the workforce. Students explore all phases of assisting in the dentist office setting. This certificate program prepares students for a career in assisting dentists in all aspects of dental treatment. The student will graduate with skills in office management, clinical assisting, laboratory procedures, dental radiography, and infection control. The program includes courses at the Larimer Campus and clinical experiences at sites

in northern Colorado. The Front Range Dental Clinic, staffed by licensed dentists and dental hygienists, is located on the FRCC campus and offers an additional clinical experience. FRCC's program is nationally accredited by the Commission on Dental Accreditation of the American Dental Association.

First Semester

DEA 1011	Introduction to Dental Practices	1
DEA 1012	Dental Science I	3
DEA 1015	Infection Control	3
DEA 1016	Medical Emerg in Dental Office	2
DEA 1021	Principles of Clinical Practice	3
DEA 1024	Dental Radiography	3
DEA 1023	Dental Materials I	3
DEA 1031	Prevent/Nutrition Dentistry	3
DEA 1035	Dental Office Management	2
DEA 1081	Internship I: Dental	1
		Subtotal: 24

Second Semester

DEA 1013	Dental Science II	3
DEA 1022	Specialties in Dentistry	2
DEA 1033	Dental Materials II	3
DEA 1034	Advanced Dental Radiography	3
DEA 1082	Internship II: Dental	2
DEA 1083	Internship III: Dental	6
		Subtotal: 19

Total Credit Hours: 43

CLINICAL EMT CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Clinical Emergency Medical Technician and enter the workforce. Students explore EMT patient care skills. This certificate program is designed to prepare students for entry-level careers in a variety of healthcare or emergency medical service environments such as fire departments, private ambulance or emergency room facilities. The certificate program consists of didactic and experiential teaching. The Clinical EMT is an Emergency Medical Technician that has expanded their knowledge and skills through professional development to better care for patients under the supervision of a doctor or nurse.

First Semester

EMS 1021	EMT Fundamentals	3
EMS 1022	EMT Medical Emergencies	4
EMS 1023	EMT Trauma Emergencies	2
EMS 1024	EMT Special Considerations	2
EMS 1070	EMT Clinical	1
		Subtotal: 12

Semester Note: Upon completion of EMS 1021, EMS 1022, EMS 1023, EMS 1024, and EMS 1070, you **should apply for the Emergency Medical Technician Certificate** (p. 43)**.**

Second Semester

HPR 1045	Medical Record Terminology	2
EMS 1132	EMS IV/IO Therapy	2
HPR 1050	Basic EKG Interpretation	2
ELECTIVE	Clinical EMT Course	2
ELECTIVE	Clinical EMT Course	2
ELECTIVE	Clinical EMT Course	2
		Subtotal: 12

Total Credit Hours: 24
Important Program Notes:

A part-time format spanning two semesters **may be offered. Check with your preferred campus for information.**

Total credits **may vary depending on elective courses** you select. You **must complete 24 credits** to earn your Clinical EMT Certificate. You **should not exceed 26 credits.** You **may want to check with your advisor** to monitor your completion progress.

EMERGENCY MEDICAL TECHNICIAN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor,**

Program Description

This program is designed for students wanting to complete a one-semester certificate in Emergency Medical Technician and enter the workforce. Students explore EMT patient care skills and procedures. Students study medical and trauma emergency procedures and assessment. This certificate program provides students with entry-level skills required for careers with a fire department, ambulance service, hospital emergency room, or disaster relief. This EMT Program also prepares students who are interested in continuing their careers and/or education in nursing, paramedicine, medical school. Students who complete the EMT certificate will be eligible to sit for the National Registry of Emergency Medical Technicians (NREMT) examination. After completing the NREMT exam, you can apply to the state for certification to work as an EMT in Colorado.

First Semester

EMS 1021	EMT Fundamentals	3
EMS 1022	EMT Medical Emergencies	4
EMS 1023	EMT Trauma Emergencies	2
EMS 1024	EMT Special Considerations	2
EMS 1070	EMT Clinical	1
		Subtotal: 12

Total Credit Hours: 12
Important Program Notes:

A part-time format spanning two semesters **may be offered. Check with your preferred campus** for information.

Health Information Technology

HEALTH INFORMATION TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. This program functions as cohorts starting fall semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Health Information Technology and enter the workforce. Students explore the medical information and records industry. With an AAS degree in Health Information Technology, students can enter a career as a health data analyst, insurance claims analyst, records technician specialist, release of information specialist, coder, patient information coordinator, or supervisor. Students may pursue careers in hospitals, physicians' offices, nursing-care facilities, outpatient care centers, home-health-care services, public health departments, or insurance firms. Students learn how to acquire, analyze, and protect digital and traditional medical information. Students will learn the science of health information management plus the background they will need regarding legal, ethical, medical, and financial areas. Download the HIT Information Packet. Accredited by the Commission on Accreditation for Health Informatics & Information Management (CAHIIM).

First Semester

ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
MAT 1260	Intro to Statistics: GT-MA1	3
CIS 1018	Introduction to PC Applications	3
HPR 1045	Medical Record Terminology	2
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
GEN EDU	PSY 1001/1002/2221/2440	3
		Subtotal: 17

Second Semester

HIT 1001	Health Information Management Science	3
HIT 1005	Principles of Healthcare Reimbursement	3
HIT 1011	Health Data Management & Information Systems	3
HIT 1022	Workflow Fund of Healthcare	3
BIO 1006	Basic Anatomy and Physiology	4
HPR 1032	Disease Process and Treatment	5
		Subtotal: 21

Third Semester

HIT 1012	Legal Aspects for Health Records	2
HIT 2022	Quality Management	3
HIT 2025	Health Information Management	3
HIT 2020	ICD Coding I	3
HIT 2021	ICD Coding II	2
HIT 2031	ICD Coding III	5
HIT 2041	CPT Coding Basic Principles	3
		Subtotal: 21

Semester Note: Upon completion of HPR 1045, BIO 1006, HPR 1032, HIT 1005, HIT 2020, HIT 2021, HIT 2031, and HIT 2041 and HIT 1089 you **should apply for the Medical Coding Certificate** (p. 44).

Fourth Semester

HIT 1088	Health Information Practicum I	2
HIT 2089	HIT Capstone Course	3
		Subtotal: 5

Total Credit Hours: 64

Important Program Notes:

You **must complete a minimum of 64 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

MEDICAL CODING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Medical Coding and enter the workforce. Students explore medical coding competencies. This certificate teaches students medical coding skills using the ICD classification system for hospitals, long term care facilities and physician practices. It prepares students for careers in health information management converting diagnoses and procedures from patient health records into the correct medical codes to ensure accurate billing and reimbursement.

First Semester

HPR 1045	Medical Record Terminology	2
BIO 1006	Basic Anatomy and Physiology	4
HPR 1032	Disease Process and Treatment	5
HIT 1005	Principles of Healthcare Reimbursement	3
		Subtotal: 14

Second Semester

HIT 2020	ICD Coding I	3
HIT 2021	ICD Coding II	2
HIT 2031	ICD Coding III	5
HIT 2041	CPT Coding Basic Principles	3
HIT 1089	Practicum	2
	Subtotal: 15	**Total Credit Hours: 29**

Integrative Health Professions & Massage Therapy

INTEGRATIVE HEALTH BODY-ENERGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree focusing on Integrative Health body work and energy work to enter the workforce as an entry-level practitioner. The AAS Integrative Health Body-Energy degree prepares the student to practice a career in an area of integrative health as a licensed Massage Therapist, certified Reflexologist, certified 200-level Yoga Instructor, and/or energy work practitioner. Students can create their own practice or work alongside other practitioners in the integrative health and medical fields including wellness facilities, spas, specialty health clinics, retirement centers, sports teams, and hospitals. Students study various hands-on integrative health modalities, healing methods, and ethical issues. This program is based on a Fall start.

First Semester

IHP 2001	Integrative Health Keystone	3
IHP 2004	Ethics in Integrative Health	2
ENG 1021 or ENG 1022	English Composition I or II (ENG 1021/22)	3
IHP 1015	Intro to Reflexology	1
IHP 1016	Reflexology of Hands & Feet	3
IHP 1020 or IHP 2020	Reiki Level I (IHP 1020) or Healing Touch Level I (IHP 2020)	1
IHP 1021 or IHP 2021	Reiki Level II (IHP 1021) or Healing Touch Level II (IHP 2021)	1
IHP 1022 or IHP 2022	Reiki Level III Master Teacher (IHP 1022) or Healing Touch Level III (IHP 2022)	1

Subtotal: 15

Semester Note: BIO 2101 Human Anatomy & Physiology I w/Lab **can be taken** to replace IHP 1014. Please contact the Program Director with questions or for clarification.

Second Semester

IHP 1014	A & P Integrative Therapies	4
IHP 1011	Intro to Massage Techniques I	1
IHP 2015	Advanced Reflexology	2
IHP 2070	Reflexology Clinical	2
IHP 2024 or IHP 2052	Jin Shin Level I (IHP 2024) or Mindfulness for Health & Wellness (IHP 2052)	2
IHP 2025 or IHP 1055	Jin Shin Level II (IHP 2025) or Intro to Qigong (IHP 1055)	2
COM 1150 or COM 1250 or COM 2300	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250) or Intercultural Communication (COM 2300)	3

Subtotal: 16

Semester Note: Courses this semester should **work toward completion** of the Massage Therapy (p. 47), Reflexology (p. 46), Yoga Teacher (p. 48), or Energy Work series certificates. **Consult the appropriate MAP** for the selected certificate(s) to **determine elective courses**.

Third Semester

MST 1011	Massage Therapy Fundamentals	4
MST 2008	Musculoskeletal Anatomy	2
MST 2016	Pathology for Massage Therapy	3
MST 1074	Massage Clinical I	2
GEN EDU	Any PSY GT-SS3 Course	3

Subtotal: 14

Fourth Semester

IHP 2005	Integrative Health Business Practices	2
MATH	Career Mathematics (MAT 1140) or Higher	3
MST 2011	Therapeutic Massage Techniques	3
HPR 1017	Anatomical Kinesiology	3
MST 2074	Massage Clinical II	2
GEN EDU	Any GT Pathways Course	3

Subtotal: 16

Total Credit Hours: 61
Important Program Notes:

Semester credits **may vary on which term students begin** the program, as this MAP is based on a Fall start. Please **contact the Program Director** for guidance if you are **beginning in the Spring or Summer terms**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

INTEGRATIVE HEALTH PROFESSIONS ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Integrative Health Professions and enter the workforce as an entry-level practitioner, coach, etc. Students explore integrative health and medical professions. The AAS Integrative Health Professions degree prepares the student to practice a career in an area of integrative health such as aromatherapy, teaching yoga, massage therapy, reflexology, energy work and health & wellness coaching. Students can create their own practice or work alongside other practitioners in the integrative health and medical fields including wellness facilities, clinics and hospitals. Students study various integrative health modalities, healing methods, and ethical issues.

First Semester

IHP 1001	Intro to Integrative Health	2
IHP 2001	Integrative Health Keystone	3
IHP 1058 or IHP 1035	Intro Health & Wellness Coaching (IHP 1058) or Intro to Herbalism (IHP 1035)	1
IHP 2058 or IHP 2030	Advanced Health & Wellness Coaching (IHP 2058) or Applied Aromatherapy (IHP 2030)	3
IHP 1006 and IHP 1007 or IHP 2035	Enhancing Personal Empowerment (IHP 1006) and Stress Mgmt for Health (IHP 1007) or Applied Herbalism (IHP 2035)	2
IHP 2052	Mindfulness for Health & Wellness	2
ENG 1021 or ENG 1022	English Composition I or II (ENG 1021/22)	3

		Subtotal: 16
Second Semester		
IHP 1008 and IHP 2059 or IHP Elective	Journaling Towards Wellness (IHP 1008) and Specialized Coaching Techniques (IHP 2059) or IHP Elective	3
IHP 2062 or IHP 2063	Lifestyle Medicine Foundations (IHP 2062) or Intro to Ayurveda Medicine (IHP 2063)	3
IHP 2072 or IHP Elective	Integrative Clinical Coaching (IHP 2072) or IHP Elective	1
COM 1150 or COM 1250 or COM 2300	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250) or Intercultural Communication (COM 2300)	3
IHP 2040	Holistic Nutrition: Digestive Wellness	3
MATH	Career Mathematics (MAT 1140) or Higher	3
		Subtotal: 16
Third Semester		
IHP 1014	A & P Integrative Therapies	4
GEN EDU	Any PSY GT-SS3 Course	3
IHP 2060	PNI: Exploring Mind-Body Connection	3
IHP 2089	Integrative Health Capstone	2
ELECTIVE	Any IHP Course	3
		Subtotal: 15

Semester Note: If you also **choose to complete the Yoga Teacher Certificate**, your elective credits for 3rd and 4th semesters **should be reserved for the 10-credit IHP 2050 course** which is only offered in the Spring term.

Fourth Semester		
ELECTIVE	Any IHP Course	3
ELECTIVE	Any IHP Course	3
IHP 2004	Ethics in Integrative Health	2
IHP 2005	Integrative Health Business Practices	2
GEN EDU	Any GT Pathways Course	3
		Subtotal: 13

Semester Note: If you also **choose to complete the Yoga Teacher Certificate**, your elective credits for 3rd and 4th semesters **should be reserved for the 10-credit IHP 2050 course** which is only offered in the Spring term.

Total Credit Hours: 60
Important Program Notes:

Semester credits **may vary depending on other semester courses** selected.

You **must complete a minimum of 60 credits** to complete this degree and you **should not exceed 60 credits**. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Integrative Health Certificates

INTEGRATIVE HEALTH & WELLNESS COACHING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Integrative Health and Wellness Coaching, meet the requirements for the National Board, and/or co-enroll in the IHP AAS degree to enter the workforce. Students explore coaching techniques for healthy lifestyles and well-being. This certificate trains individuals in the core competencies of the coaching profession, including skills in relationship-building, active listening, powerful questioning, goal-setting, motivational interviewing, and the influences of positive psychology and lifestyle medicine. Students will also learn about nutrition, fitness and mindfulness. As a career health and wellness coach in professional settings the student will empower clients to make healthy lifestyle choices and lasting behavioral changes to optimize their health and well-being. This program has been approved and accepted into the consortium of the National Board for Health & Wellness Coaching (NBHWC) https://nbhwc.org/.

First Semester		
IHP 1058	Intro to Health & Wellness Coaching	1
IHP 2058	Advanced Health Wellness Coaching	3
IHP 2001	Integrative Health Keystone	3
IHP 1006	Enhancing Personal Empowerment	1
IHP 1007	Stress Management for Health	1
IHP 2040	Holistic Nutrition: Digestive Wellness	3
		Subtotal: 12

Semester Note: Students must also **meet the requirements for the National Board** in having a previous two-year degree or higher, and/or are willing to **co-enroll in the IHP AAS degree**.

Second Semester		
IHP 2059	Specialized Coaching Techniques	2
IHP 2052	Mindfulness for Health & Wellness	2
IHP 1008	Journaling Towards Wellness	1
IHP 2062	Lifestyle Medicine Foundations	3
IHP 2060	PNI: Exploring Mind-Body Connection	3
ELECTIVE	IHP 2072 or Any IHP or MST Course(s)	1
		Subtotal: 12

Semester Note: ***Coaching Clinic IHP 2072*** **is recommended** for the elective choice. However, you **must complete 1 total credit hour of IHP Electives** over the 1st and 2nd semesters and may **select any of the IHP courses based on your interest**.

This certificate is **offered on Realtime Remote** with both a Fall and Spring starting cohort. Please **contact the Program Director** for more information and to **confirm you meet the requirements** to become a board-certified coach by **having a previous two-year degree or higher,** or can **meet the requirements for relevant board-approved work experience**.

Total Credit Hours: 24

REFLEXOLOGY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If

you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Reflexology and enter the workforce. Students explore the techniques and benefits of reflexology. This certificate program introduces students to reflexology, which is a non-invasive form of acupressure on the feet, hand and ears that holistically facilitates opening the channels for healing energy to circulate to all parts of the body. Career options include creating an independent practice. In accordance with national credentialing and membership standards, students will have well over 300 contact hours. Successful graduates are eligible to take the national certification exam from the American Reflexology Certification Board (ARCB) and receive professional membership status with Reflexology Association of America (RAA).

Note: *60%+ of the coursework for contact hours must be hands-on and <40% may be taken online. Please contact the Program Director for clarification of the contact hour calculation.*

First Semester

IHP 1014	A & P Integrative Therapies	4
IHP 1015	Intro to Reflexology	1
IHP 1016	Reflexology of Hands & Feet	3
ELECTIVE	Any IHP or MST Course(s)	2
		Subtotal: 10

***Semester Note:** BIO 2101 Human Anatomy & Physiology I w/Lab can be taken to replace IHP 1014, and also taking BIO 2102 Human Anatomy & Physiology II should be included if transferring for advanced training. Please speak to the Program Director for more information.

Second Semester

IHP 2015	Advanced Reflexology	2
IHP 2070	Reflexology Clinical	2
IHP 2004	Ethics in Integrative Health	2
IHP 2005	Integrative Health Business Practices	2
ELECTIVE	Any IHP or MST Course(s)	2
		Subtotal: 10

Total Credit Hours: 20
Important Program Notes:

IHP 2004 **may be taken either the first or second term** based on your scheduling preference in taking IHP or MST elective choices.

Program cohorts **start in Fall every other year beginning in Fall 2023**.

MASSAGE THERAPY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts. Due to the Covid-19 pandemic, please **contact the Program Director for information regarding cohort start times**. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a three semester Certificate in Massage Therapy and enter the workforce. Students explore massage therapy theory, techniques and benefits. This certificate program prepares students to practice as a Licensed Massage Therapist in the State of Colorado. Students are trained in state-of-the-art professional massage practices and therapeutic techniques, including coursework in Neuromuscular Anatomy, Kinesiology and Pathology. Career options include clinical, corporate and private settings. Students will complete two clinical rotations. Upon successful completion, students will be prepared to take the national certification exam (MBLEx) through the Federation of State Massage Therapy Boards (FSMTB).

First Semester

IHP 1011	Intro to Massage Techniques I	1
A&P NOTE	IHP 1014 (A&P Integrative Therapies)*	0*
		Subtotal: 1

Second Semester

MST 1011	Massage Therapy Fundamentals	4
MST 2008	Musculoskeletal Anatomy	2
MST 2016	Pathology for Massage Therapy	3
MST 1074	Massage Clinical I	2
		Subtotal: 11

Third Semester

MST 2011	Therapeutic Massage Techniques	3
HPR 1017	Anatomical Kinesiology	3
MST 2074	Massage Clinical II	2
		Subtotal: 8

Total Credit Hours: 20
Important Program Notes:

***If you have had previous Anatomy & Physiology training or coursework** in college or high school within the last 5 years, please **inform the Program Director**. Otherwise, **taking IHP 1014 prior to enrolling in the Massage Therapy Program cohort is strongly recommended** to serve as preparation for successful completion of the Massage Therapy Program. However, **BIO 2101 Human Anatomy & Physiology I w/Lab can be an allowable substitution** for prep coursework; also **taking BIO 2102 Human A&P II should be included if transferring** for advanced training. Please speak to the Program Director with any questions.

Program cohorts **start Fall term.**

INTEGRATIVE HEALTH PROFESSIONS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-semester Certificate in Integrative Health Professions and enter the workforce. Students explore expanding integrative therapies. Students study nutrition balance, holistic modalities, body-mind responses, creating an independent practice, and healing presence. This certificate program supplements a health

professional's practice with knowledge of emerging integrative therapies and the overall concepts of holism and health prevention. Nurses, physical/occupational therapists, massage therapists, and others with existing medical, integrative health or wellness-promotion backgrounds and careers, or those who have an existing college degree will benefit from this certificate for professional development, continuing education credits, or to combine with one of the other professional IHP certificates.

First Semester

IHP 2001	Integrative Health Keystone	3
IHP 2040	Holistic Nutrition: Digestive Wellness	3
ELECTIVE	IHP 2060/2061/2062/2063	3
IHP 2000	Creating Healing Presence	1
ELECTIVE	Any IHP Course(s)	5
		Subtotal: 15

Total Credit Hours: 15
Important Program Note:

This certificate **may be completed in one full-time term or two part-time terms.**

YOGA TEACHER CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one semester Certificate in Yoga Teacher and enter the workforce. Students explore yoga techniques and benefits. This certificate program prepares students to be a professional career Hatha Yoga Teacher in studios, health clubs, private practice or other health-promotion arenas. Students will develop skills to teach yoga and relaxation to diverse populations who can benefit physically, mentally and spiritually from learning this ancient art of stretching, body postures and relaxation techniques. This certificate is certified by Yoga Alliance and successful program graduates are eligible for their RYT200 level certification.

First Semester

IHP 2050	RYT 200 Yoga Teacher Training	10
ELECTIVE	Any IHP Course(s)*	2
		Subtotal: 12

Total Credit Hours: 12
Important Program Notes:

Program cohorts **start every Spring.**

For Yoga Alliance certification, a **final grade of "B" or higher is required.**

****Advanced Yoga Institute (IHP 2051) offers students who **successfully complete the RYT200 certification** the opportunity to **enhance their training** by adding another formal yoga certification. **Must be taken at a later term after successful completion of IHP 2050,** or if **completed prior to enrolling at FRCC.** If you **choose to take IHP 2051,** you will **increase your total credits to 15** for this certificate.

Medical Assistant Certificates

MEDICAL ASSISTANT CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall semester of each academic year at the Boulder County Campus, Larimer Campus, and Westminster Campus. Only the Westminster Campus has a cohort that starts every Summer semester. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Medical Assistant and enter the workforce. Students explore the administrative and clinical skills required in health care settings. This certificate is designed to prepare individuals for a career 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 and Physicians Current Procedural Terminology (CPT) coding. Clinical skills include assisting with patient intake, physical examinations, diagnostic tests, and treatment procedures including administration of medications and first aid.

First Semester

HPR 1038	Intro to Medical Terminology	1
HPR 1032	Disease Process and Treatment	5
MAP 1010	Medical Office Administration	4
MAP 1050	Pharmacology for Medical Assistants	3
		Subtotal: 13

Second Semester

MAP 2038	Medical Assisting Laboratory	4
MAP 2040	Medical Assisting Clinical Skills	4
MAP 1083	Medical Assistant Internship	4
MAP 2069	Review for Medical Assistant National Exam	1
		Subtotal: 13

Total Credit Hours: 26

MEDICAL OFFICE ADMINISTRATIVE ASSISTANT CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one semester Certificate in Medical Office Administrative Assistant and enter the workforce. Students explore administrative skills and patient customer service in health care settings. This program trains students for careers as health care administrative assistants knowledgeable in medical terminology and Electronic

Health Records (EHR), participating in the daily administrative operations of a medical facility, checking patients in, verifying patient insurance, and providing quality customer service to patients.

First Semester

HPR 1038	Intro to Medical Terminology	1
MAP 1010	Medical Office Administration	4
		Subtotal: 5

Total Credit Hours: 5

Nursing

NURSING BACHELOR OF SCIENCE (RN TO BSN)

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your BSN Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a four-year BSN Degree in Nursing and enter the workforce. Students explore procedures to provide and manage care in various health care facilities. Students acquire skills and techniques to perform in nursing care facilities, hospitals, clinics, physician offices, research laboratories, pharmaceutical companies, education institutions, state, public and government institutions, insurance and law firms, and private companies. The RN to BSN program is a continuation of preparation for entry-level nursing practice as a registered nurse. The program is a combination of hybrid and online courses, and can be completed in four semesters full-time. For students currently enrolled in the associate degree nursing program as well as those working full-time as a registered nurse, the program is flexible allowing extended time to earn a degree. As some employers show a preference for baccalaureate prepared nurses, the BSN can increase eligibility for nursing roles in direct patient care and leadership. The student must be licensed as a registered nurse prior to completion of the RN-BSN program.

RN Transfer Credit

TRANSFER	Transfer Credit from Completed RN Program	71.5
		Subtotal: 71.5

First Semester

ENG 1022	English Composition II: GT-CO2	3
MAT 1260	Intro to Statistics: GT-MA1	3
NUR 3001	Integration into BSN Practice	3
NUR 3002	Trends in Nursing Practice	3
		Subtotal: 12

Semester Note: Introduction to Statistics: MA1 **(MAT 1260)** is a prerequisite to Nursing Research/Evidence Based Practice (NUR 3003).

Second Semester

NUR 3003	Nursing Research/Evidence Based Practice	3
ELECTIVE	NUR 3004/3005/3006/3007	3
GT- SS	Any Social & Behavioral Science (GT-SS) Course	3
GT- HI1	Any History (GT-HI1) Course	3
		Subtotal: 12

Third Semester

NUR 4008	Legal and Ethical Issues	3
NUR 4009	Leadership in the Nursing Profession	3.5
GT- AH	Any Arts & Humanities (GT-AH) Course	3
GEN EDU	Any GT-AH, GT-HI, or GT-SS Course	3
		Subtotal: 12.5

Fourth Semester

NUR 4010	Community Health Nursing Practicum	6
NUR 4011	Senior Seminar	3
ELECTIVE	NUR 3004/3005/3006/3007	3
		Subtotal: 12

Total Credit Hours: 120
Important Program Notes:

You **must complete a minimum of 120 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

NURSING ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a five semester AAS Degree in Nursing and enter the workforce. Students explore procedures to provide and manage care in various health care facilities. Students acquire skills and techniques to perform in acute care hospitals, long term care, clinics, home health and health maintenance organizations. This program prepares students for a career as an entry-level registered nurse (RN) in a variety of health care settings. With an AAS degree in Nursing, students are eligible to apply to take the National Council Licensure Examination (NCLEX-RN) exam for licensure as a RN. FRCC's nursing degree is approved by the Colorado Board of Nursing.

First Semester

ENG 1021 or ENG 1022	English Composition I or II (ENG 1021/22)	3
PSY 2440	Human Growth & Development: GT-SS3	3
BIO 2101	Human Anatomy & Physiology I w/Lab: GT-SC1	4
NUTRITION	Dietary Nutrition (HPR 1010) or Human Nutrition (HWE 1050)	1
BIO 2104	Microbiology w/Lab: GT-SC1	4
		Subtotal: 15

Semester Note: First Semester courses are **required and must be taken prior to program admittance.** You **should complete the Nursing Program application process** prior to declaring as a nursing student and **take Semester 2 through Semester 5 as a full-time nursing student**.

Second Semester

NUR 1009	Fundamentals of Nursing	6
NUR 1012	Basic Concepts of Pharmacology	2
BIO 2102	Human Anatomy & Physiology II w/Lab: GT-SC1	4
MAT 1120	Math for Clinical Calculations	3
		Subtotal: 15

Third Semester

NUR 1006	Medical Surgical Nursing Concepts	7
NUR 1050	Maternal Child Nursing	6
BIO 2116	Pathophysiology	4
		Subtotal: 17

Semester Note: If you are completing Transition into Practical Nursing (NUR 1069) and the first year of the nursing program, you **may apply for the NCLEX® exam**for practical nursing licensure. NUR 1069 **is not offered every semester.** Please **check with program director for more information.**

Fourth Semester

NUR 2006	Advanced Concepts of M/S Nursing I	6.5
NUR 2012	Pharmacology II	2
NUR 2011	Psychiatric-Mental Health Nursing	4
		Subtotal: 12.5

Fifth Semester

NUR 2016	Advanced Concepts of M/S Nursing II	5
NUR 2030	Transition to Professional Nursing Practice	4
GEN EDU	Any GT-AH or GT-SS Course	3
		Subtotal: 12

Total Credit Hours: 71.5
Important Program Notes:

You **must complete this program** as a full-time nursing student beginning in Semester 2. **Contact an advisor** regarding your scheduling needs.

You **must complete a minimum of 71.5 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

LPN TO ADN ASSOCIATE OF APPLIED SCIENCE

This AAS degree is currently known as "Nursing Advanced Placement Bridge Program LPN to ADN". It has been requested to be retitled to "LPN to ADN AAS". This award will undergo review by the Colorado Community College System (CCCS), the Higher Learning Commission (HLC), and the U.S. Department of Education (ED) for the title change requested. Upon final ED approval, this statement will be removed and a note placed in our Catalog Addendum noting the date of the approved title change.

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description
This program is designed for students wanting to transfer in credit from a completed LPN program and finish the remaining AAS Degree curriculum in Nursing to earn a LPN to ADN AAS degree in two-years and enter the workforce. Students explore human anatomy and physiology, microorganisms, human development, and pathophysiology. This is an option for students who are licensed as a practical nurse in Colorado. Currently licensed LPNs and those interested in transferring into the AAS nursing program should contact wcnursing@frontrange.edu for admissions information. The LPN to ADN AAS degree program is a four-semester program offered at the Westminster Campus only. FRCC's nursing degree is approved by the Colorado Board of Nursing and accredited by the Accreditation Commission for Education in Nursing Inc. (ACEN).

LPN Transfer Credit

TRANSFER	Block Credit Transfer from Completed LPN Program	21
ENG 1021	English Composition I: GT-CO1	3
PSY 2440	Human Growth & Development: GT-SS3	3
BIO 2101	Human Anatomy & Physiology I w/Lab: GT-SC1	4
NUTRITION	Dietary Nutrition (HPR 1010) or Human Nutrition (HWE 1050)	1
BIO 2104	Microbiology w/Lab: GT-SC1	4
BIO 2102	Human Anatomy & Physiology II w/Lab: GT-SC1	4
MATH	Math for Clinical Calculations (MAT 1120) or Any GT-MA1	3
BIO 2116	Pathophysiology	4
GEN EDU	GT-AH or GT-SS	3
		Subtotal: 50

First Semester

NUR 1089	Transition from LPN to ADN	3
		Subtotal: 3

Second Semester

NUR 2006	Advanced Concepts of M/S Nursing I	6.5
NUR 2012	Pharmacology II	2
NUR 2011	Psychiatric-Mental Health Nursing	4
		Subtotal: 12.5

Third Semester

NUR 2016	Advanced Concepts of M/S Nursing II	5
NUR 2030	Transition to Professional Nursing Practice	4
		Subtotal: 9

Total Credit Hours: 74.5
Important Program Note: This AAS degree requires the completion of 74.5 credits. The credits are from 21 credits of block transfer credit from previous LPN completion, 29 credits from general education courses listed in the LPN Transfer credit above, and 24.5 credits of remaining Nursing coursework found in Semesters 2-4.

You **must complete a minimum of 74.5 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

PRACTICAL NURSING EXIT OPTION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year Certificate in Practical Nursing Exit Option and enter the workforce. Students explore knowledge and skills of safe patient-centered nursing care in a variety of health care settings. This option allows students to complete the first year of the AAS Nursing and NUR 1069 (p. 246) to receive a certificate and be eligible to apply to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).

First Semester

ENG 1021 or ENG 1022	English Composition I or II (ENG 1021/22)	3
PSY 2440	Human Growth & Development: GT-SS3	3
BIO 2101	Human Anatomy & Physiology I w/Lab: GT-SC1	4
NUTRITION	Dietary Nutrition (HPR 1010) or Human Nutrition (HWE 1050)	1
BIO 2104	Microbiology w/Lab: GT-SC1	4
	Subtotal:	**15**

Semester Note: First Semester courses are **required and must be taken prior to program admittance.** You **should complete the Nursing Program application process** prior to declaring as a nursing student and **take Semester 2 and Semester 3 as a full-time nursing student**.

Second Semester

NUR 1009	Fundamentals of Nursing	6
NUR 1012	Basic Concepts of Pharmacology	2
BIO 2102	Human Anatomy & Physiology II w/Lab: GT-SC1	4
MAT 1120	Math for Clinical Calculations	3
	Subtotal:	**15**

Semester Note: You **must complete this program** as a full-time nursing student beginning in Semester 2. **Contact an advisor** regarding your scheduling needs.

Third Semester

NUR 1006	Medical Surgical Nursing Concepts	7
NUR 1050	Maternal Child Nursing	6
	Subtotal:	**13**

Fourth Semester

NUR 1069	Transition into Practical Nursing	4
	Subtotal:	**4**

Semester Note: If you are completing Transition into Practical Nursing (**NUR 1069**) and the first year of the nursing program, you **may apply for the NCLEX® exam** for practical nursing licensure. NUR 1069 **is not offered every semester.** Please **check with program director for more information.**

Total Credit Hours: 47

PRACTICAL NURSING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **must be completed in the order listed**. This program functions as cohorts starting fall semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a three semester Certificate in Practical Nursing and enter the workforce. Students explore knowledge and skills of safe patient-centered nursing care. This program is for students whose primary goal is practical nursing to assist in providing general nursing care under the direction of a registered nurse, physician, or dentist. The program prepares students for careers in long term care facilities, clinics, home care, doctors' offices, and some hospitals. Graduates of the program receive a certificate in practical nursing and are eligible to apply to take the National Council Licensure Examination for Practical Nurses (PN NCLEX®).

First Semester

A & P	Anatomy and Physiology (BIO 1006 or 2101 and 2102)	4
ENG 1021	English Composition I: GT-CO1	3
	Subtotal:	**7**

Semester Note: First Semester courses are **required and must be taken prior to program admittance.** You **should complete the Practical Nursing Program application process** prior to declaring as a practical nursing student and **take Semester 2 and Semester 3 as a full-time practical nursing student**.

Second Semester

NUR 1001	Pharmacology Calculations	1
NUR 1002	Alterations in Adult Health I	4
NUR 1003	Basic Health Assessment for the Practical Nurse	1
NUR 1005	Practical Nursing Arts & Skills	6
NUR 1010	Pharmacology for Practical Nursing	3
NUR 1016	Basic Concepts of Geriatric Nursing	1
NUR 1070	Clinical I	3
	Subtotal:	**19**

Semester Note: You **must complete this program** as a full-time nursing student beginning in Semester 2. **Contact an advisor** regarding your scheduling needs.

Third Semester

NUR 1004	Alterations in Adult Health II	5
NUR 1011	Advancement into Practical Nursing	1
NUR 1013	Basic Concepts of Maternal-Newborn Nursing	2
NUR 1014	Basic Concepts of Pediatric Nursing	2
NUR 1015	Basic Concepts of Mental Health Nursing	1
NUR 1071	Clinical II	2
NUR 1072	Clinical III	1
NUR 1073	Clinical IV	3
	Subtotal:	**17**

Total Credit Hours: 43

NURSE AIDE CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Nurse Aide and enter the workforce. Students explore patient care procedures, skills, regulations and ethical issues. Learn the entry-level skills required for a career as a CNA in a long-term care facility, acute care facility or a home health care agency. Not all patients a nurse aide cares for are elderly, but the special needs of the geriatric population are an emphasis of the Nurse Aide training program at FRCC. A Nurse Aide certificate from FRCC qualifies the student to take the State Certification Examination to become a Certified Nurse Aide (CNA).

First Semester

NUA 1001	Nurse Aide Health Care Skills	4
NUA 1070	Nurse Aide Clinical Experience	1
		Subtotal: 5

Total Credit Hours: 5
Program Note:

For contact information, pass rate information, and/or information regarding CNA packets, please visit our website to learn more. As a reminder, all programs at FRCC require courses to be completed with a grade of "C" or better in order to earn a certificate or degree. More information can be found here (p. 137).

ADVANCED PHARMACY TECHNICIAN TRAINING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Pharmacy Technician and enter the workforce. This certificate provides the advanced level of pharmacy technician training. This program will prepare you to perform pharmacy-related functions, generally working under the direct supervision of a licensed pharmacist. Our training includes both didactic and simulated components along with a clinical component. Our curriculum prepares students to work in both community and institutional pharmacy settings. This program will also prepare you to sit to take the Pharmacy Technician National Examination. Upon successful completion of the Pharmacy Technician Training Program, the student is awarded a certificate of completion in Advanced Pharmacy Technician Training from Front Range Community College. Our program also offers an ACPE - National Sterile Compounding Certification Course, which you can take after you have completed your pharmacy technician courses or you have taken the National Pharmacy Technician Certification exam. Students can enter the program in the fall or spring semester. FRCC is committed to meeting the pharmacy technician needs of the community it serves.

First Semester

PHT 1012	Pharmacy Law and Ethics	2
PHT 1015	Pharmacology I	3
PHT 1040	Institutional Pharmacy	3
PHT 1016	Pharmacology II	3
PHT 1041	Community Pharmacy	3
PHT 1035	Pharmaceutical Calculations & Compounding Techniques	4
		Subtotal: 18

Second Semester

PHT 1070	Pharmacy Clinical: Institutional	4
PHT 1071	Pharmacy Clinical: Community	4
		Subtotal: 8

Total Credit Hours: 26
Information Session Required for Registration:

Attending an Information Session is strongly recommended. Information Sessions are offered **monthly on the first Thursday at 1:00 pm**.

Register in advance for this meeting: https://frontrange-edu.zoom.us/meeting/register/tZMofuCuqTIoHd0WlCv019wgAN-bdj4TbE95

After registering, you will receive a confirmation email containing information about joining the meeting.
If you have any questions, please contact the Program Director.

PHLEBOTOMY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. Courses **must be completed in the same semester**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Phlebotomy and enter the workforce. Students explore the duties in venipuncture, capillary puncture, and special collection procedures. This program is designed to provide students with the entry-level skills required for a career as a phlebotomist in health care settings. The program is designed to be completed in one semester. Students prepare to sit for the Certified Phlebotomy Technician (CPT) exam offered by the National Health Career Association (NHA).

First Semester

HPR 1020	Phlebotomy	4
HPR 2089	Capstone	1
		Subtotal: 5

Total Credit Hours: 5
Program Note:

Faculty recommend that **HPR 1020 and HPR 2089 are enrolled on the same campus**. Please **work with your Pathways Advisor** so **courses are taken on the same campus**.

STERILE PROCESSING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Sterile Processing and enter the workforce. A sterile processing technician is an integral member of the surgical team who cleans, sterilizes, and assembles surgical instruments, equipment, and supplies for use in operating rooms and other medical and surgical facilities. Students will receive instruction in sterilization, infection control, decontamination, and surgical instrumentation processing, distribution, and record-keeping. This program develops the knowledge and skills for an entry-level job as a Sterile Processing Technician. This certificate is part of an apprenticeship program partnership with Centura Health and has a selective admission process.

First Semester		
SPI 1000	Sterile Instrument Processing	4
SPI 1001	Sterile Instrument Lab Skills	4
SPI 1081	Internship: Sterile Processing	9
SPI 2079	Seminar: Sterile Processing	1
		Subtotal: 18

Total Credit Hours: 18

SURGICAL TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Surgical Technology and enter the workforce. Students explore methods of providing patient care during all phases of surgery. The surgical technologist is an integral member of the surgical team including the surgeon, anesthesiologist, and nurse to deliver patient care before, during and after surgery. Before an operation, surgical technologists help prepare the operating room by setting up surgical instruments and equipment. During the surgery, technologists pass instruments and sterile supplies to surgeons and assistants. This four-semester program develops the knowledge and skills for an entry level career as a surgical technologist, one of the fastest growing jobs in health care. Surgical technologists work in a variety of settings including hospitals, surgery departments, obstetric departments, and ambulatory surgery centers. The curriculum is in alignment with the standards set forth by the Association of Surgical Technologists (AST) core curriculum guidelines. FRCC Surgical Technology Program has been granted accreditation with the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Accreditation Review Council for Education in Surgical Technology & Surgical Assisting (www.arcstsa.org) which will allow students who successfully complete the program to sit for the National Board of Surgical Technology & Surgical Assisting (NBSTSA) certification and have the credential of Certified Surgical Technologist (CST).

First Semester		
BIO 2101	Human Anatomy & Physiology I w/Lab: GT-SC1	4
BIO 2104	Microbiology w/Lab: GT-SC1	4
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
MATH	Career Mathematics (MAT 1140) or Higher	3
HPR 1045	Medical Record Terminology	2
		Subtotal: 16
Second Semester		
BIO 2102	Human Anatomy & Physiology II w/Lab: GT-SC1	4
STE 1000	Fundamentals Surgical Technology	6
STE 1001	Surgical Technology Skills Lab	4
STE 1005	Pharmacology of Surgical Technology	2
		Subtotal: 16
Third Semester		
PSY 2440	Human Growth & Development: GT-SS3	3
STE 1010	Surgical Procedures I	3
STE 1015	Surgical Procedures II	3
STE 1020	Surgical Procedures III	3
STE 1033	Surgical Instruments Lab I	1.5
STE 1034	Surgical Instruments Lab II	1.5
		Subtotal: 15
Fourth Semester		
STE 1081	Internship I	4
STE 1082	Internship II	4
STE 1083	Internship III	4
STE 2069	CST Exam Review Course	1
		Subtotal: 13

Total Credit Hours: 60
Important Program Notes:

Beginning Summer 2022, the Surgical Technology Program (STE) will be offering 3 starts per year. Students will be able to **begin the STE program in either Fall, Spring, or Summer**. The MAP itself will not change.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Veterinary Technology

VETERINARY TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a five-semester AAS Degree in Veterinary Technology and enter the workforce. Students explore the technical and problem-solving skills required for veterinary health care. This degree trains students in veterinary health and handling of a variety of animals including household pets, food animals, exotics, birds, and common laboratory animal species. The program covers topics such as anatomy and physiology, radiology, parasitology, medical and surgical nursing, anesthesia, and pharmacology. Upon completion of the Veterinary Technician degree, students will be prepared to take the Veterinary Technician National Exam (VTNE). Once they pass the VTNE, they can apply to become credentialed technicians. In the state of Colorado technicians are registered through the State Board of Veterinary Medicine (SBVM). Students moving out of state are encouraged to review the laws and regulations of that state.

First Semester

BIO 1111	General College Biology I w/Lab: GT-SC1	5
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
VET 1002	Veterinary Medical Terminology	1
CIS 1009	Management Software: Using AVImark	1
MAT 1120	Math for Clinical Calculations	3
		Subtotal: 13

Semester Note: Register for MAT 1120 and CIS 1009 the semester prior to entering the VET program.

Second Semester

VET 1020	Office Procedures & Relations	2
VET 1016	Humane Treatment Handling of Animals	3
VET 2005	Veterinary Anatomy & Physiology I	4
VET 1008	Intro to Laboratory Procedures	3
VET 1034	Diagnostic Imaging	2
		Subtotal: 14

Third Semester

VET 1206	Exotic Animal Handling	2
VET 1015	Surgical Nursing	2
VET 2006	Veterinary Anatomy & Physiology II	4
VET 2024	Pharmacology Veterinary Tech	3
VET 1241	Clinical Laboratory Procedures	4
		Subtotal: 15

Fourth Semester

VET 2025	Anesthesiology	3
VET 2027	Animal Nutrition	2
VET 2038	Small Animal Nursing	2
VET 2039	Large Animal Nursing	2
BIO 2104	Microbiology w/Lab: GT-SC1	4
VET 1080	Internship: Private Practice	3
		Subtotal: 16

Fifth Semester

VET 2042	Veterinary Critical Care	2
VET 2050	Clinical Competency Evaluation	1
VET 2082	Internship	7
VET 2083	Internship	1
VET 2078	Workshop	1
VET 2079	Seminar	1
VET 2070 or VET 2081	Clinical I (VET 2070) or Internship (VET 2081)	1
		Subtotal: 14

Total Credit Hours: 72
Important Program Notes:

You **may complete the microbiology requirement** in any semester including summer semesters. Biology coursework **must be completed within the last seven years.**

VET 1009 **can be taken in addition to program requirements** to help students explore different opportunities within veterinary medicine.

You **must complete a minimum of 72 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

VETERINARY ASSISTANT CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two semester Certificate in Veterinary Assisting and enter the workforce. The Veterinary Assistant certificate program provides training in veterinary health and handling of a variety of domestic animals with the focus on tasks for assisting the Veterinary Technician and Veterinarians to become a part of the veterinary medical team. Completion of all course work is required before the student is eligible for a private-practice internship. After completion of the program graduates are eligible to sit for the National Assistant exam to become an Approved Veterinary Assistant (AVA). Please see the NAVTA web page at: https://www.navta.net/veterinary-assistants-program/ for more information.

First Semester

VET 1002	Veterinary Medical Terminology	1
VET 1003	Veterinary Assistant Restraint & Handling	2
VET 1020	Office Procedures & Relations	2
VET 1009	Applied Companion Animal Behavior	3
		Subtotal: 8

Semester Note: These courses are **offered only in the fall semester.**

Second Semester

VET 1004	Assistant Large Animal Nursing	1
VET 1017	Veterinary Assistant Surgery & Nursing Care	2
VET 1014	Vet Asst Lab & Clin Procedures	3
VET 1083	Internship	2.25
		Subtotal: 8.25

Semester Note: These courses are **offered only in the spring semester.**

Total Credit Hours: 16.25

Liberal Arts, Communication & Design

This Career and Academic Community includes the following programs: Art History, Studio Art, Communication, English, French, Digital Animation, Graphic Design, Video Production & Editing, Web Design, Music, Recording Arts Technology, Philosophy, Spanish, and Theater. To learn more about the program click on the program below.

ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA degree. The Associate of Arts (AA) Degree provides students with both breadth and depth of knowledge in Liberal Arts as well as Social and Behavioral Sciences that prepares them for transfer into a bachelor degree program at a four-year college or university. Careers typically require a bachelor's or master's degree. Students may tailor this general Associate of Arts (AA) 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.

First Semester

ENG 1021	English Composition I: GT-CO1	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
GT- SS	Any Social & Behavioral Sciences (GT-SS)	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 15

Second Semester

ENG 1022	English Composition II: GT-CO2	3
MATH	MAT 1240/1260/1340 or Any GT-MA1	3
GT- SS	Any Social & Behavioral Sciences (GT-SS)	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 15

Third Semester

GT- AH	Any Arts & Humanities (GT-AH) Course	3
GT- HI1	Any History (GT-HI1) Course	3
GT- SC1	Any Science (GT-SC1) Course	4
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 16

Fourth Semester

CHOICE	Student Choice of any GT-AH, GT-SS or GT-HI	3
GT- SC1/2	Any Science (GT-SC1 or GT-SC2) Course	3
GEN EDU	COM 1150/1250/2300	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	2
		Subtotal: 14

Total Credit Hours: 60
Important Program Notes:

You **may complete** any gtPathways-approved GT-CO1 course and GT-CO2 course **OR** any gtPathways-approved GT-CO2 course and GT-CO3 course.

Credits may vary depending on prior semester completion.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

ASSOCIATE OF ARTS IN AMERICAN SIGN LANGUAGE & DEAF STUDIES

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at Front Range Community College and transfer to a university to pursue a BA degree. The Associate of Arts (AA) Degree in American Sign Language and Deaf Studies provides students with both breadth and depth of knowledge in ASL & Deaf Studies, Liberal Arts, as well as Social and Behavioral Sciences that prepares them for transfer into a bachelor degree program at a four-year college or university. Careers typically require a bachelor's or master's degree. Students may complete this Associate of Arts (AA) Degree in ASL & Deaf Studies to transfer to the University of Northern Colorado to pursue studies in the ASL-English Interpretation program.

First Semester

ASL 1123	American Sign Language III	5
ENG 1021	English Composition I: GT-CO1	3
ANT 1001	Cultural Anthropology: GT-SS3	3
GEN EDU	COM 1150/1250/2300	3
		Subtotal: 14

Semester Note: ASL 1121 and/or ASL 1122 will only be necessary if determined per student's proficiency level. Students starting with ASL proficiency level of ASL 1123 (ASL III) will need to complete a minimum of 3 elective credits in semester 4. In this case, it is recommended that you take either PSY 1001 or SOC 1001. Students needing ASL 1121 and/or ASL 1122 will need to complete these courses before starting ASL 1123 in semester 1. Up to 3 credits earned from the completion of these courses may be applied as electives to fulfill this degree.

Second Semester

ASL 2221	American Sign Language IV: GT-AH4	3
ENG 1022	English Composition II: GT-CO2	3
MATH	Any GT-MA1, Math for Liberal Arts (MAT 1240) or Stats (MAT 1260)	3
IPP 1047	Survey of Deaf Culture	3
GT- SS	Any Social & Behavioral Sciences (GT-SS)	3
	Subtotal: 15	

Third Semester

ASL 2222	American Sign Language V: GT-AH4	3
ASL 2244	ASL Linguistics	3
GT- SC1	Any Science (GT-SC1) Course	4
GT- HI1	Any History (GT-HI1) Course	3
IPP 1021	Aspects of Interpreting I	3
	Subtotal: 16	

Fourth Semester

ASL 2223	American Sign Language VI	3
GT- SC1/2	Any Science (GT-SC1 or GT-SC2) Course	3
GT- AH1/2/3	Any Arts & Humanities (GT-AH1, AH2, or AH3) Course	3
ASL 2243	Discourse Analysis	3
ELECTIVE	Any Approved Elective List Course	3
	Subtotal: 15	

Semester Note: GT-AH courses must be completed from two different categories. Students must select GT-AH course from one of the following: (GT-AH1, GT-AH2, or GT-AH3).

Total Credit Hours: 60
Important Program Notes:

ASL 1121 and/or ASL 1122 will only be necessary if determined per student's proficiency level. Students starting with ASL proficiency level of ASL 1123 (ASL III) will need to complete a minimum of 3 elective credits in semester 4. In this case, it is recommended that you take either PSY 1001 or SOC 1001. Students needing ASL 1121 and/or ASL 1122 will need to complete these courses before starting ASL 1123 in semester 1. Up to 3 credits earned from the completion of these courses may be applied as electives to fulfill this degree.

Taking any math course (GT-MA1) and/or science course (GT-SC1 or GT-SC2) for more credits than listed in this MAP will reduce the elective credits needed for you to complete your degree, since these credits will apply toward your electives. Please work with your advisor to best determine which math (GT-MA1) and science courses (GT-SC1 or GT-SC2) work best for you.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Architectural Engineering and Construction Technology

ARCHITECTURAL & BUILDING SCIENCE ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Architectural & Building Science and enter the workforce. Students explore construction and drafting concepts and techniques, materials, and overall building design. This degree prepares the student for a career as an architectural CAD drafting technician for architectural design and construction firms, governmental entities, large corporations, and manufacturers/suppliers or building products. It is a comprehensive two-year study in architectural drafting, elementary design and building science. The program emphasizes green/sustainable architectural practices and essential technical concepts used in architectural CAD and building information modeling (BIM).

First Semester

AEC 1210	Basic Architectural Drafting	4
AEC 1520	Construction Materials and Systems	3
AEC 1600	Construction Practices and Documents	2
CAD 2220	Revit Architecture	3
MATH	Career Mathematics (MAT 1140) or Higher	3
	Subtotal: 15	

Second Semester

AEC 1231	Residential Construction Drawing	4
CAD 2221	Advanced Revit Architecture	3
AEC 2520	Building Environmental Systems I	3
ELECTIVE	IND 2201 or Any AEC, CAD, or IND Course	3
ART 1201	Drawing I	3
	Subtotal: 16	

Semester Note: You may **take AEC 1232 this semester instead of an elective course.** If you complete AEC 1232 in semester 2, you should apply for the **Architectural Drafting Certificate** (p. 57)**.**

Third Semester

AEC 1232	Commercial Construction Drawing	4
AEC 2300	Sustainable Building Systems	3
ELECTIVE	IND 2300 or Any AEC, CAD, or IND Course	3
COM 1150	Public Speaking	3
ENGLISH	Composition I/II (ENG 1021/1022) or Technical Writing (ENG 1031)	3
	Subtotal: 16	

Semester Note: Upon completion of AEC 1210, AEC 1520, CAD 2220 (semester 1) and AEC 1231 (semester 2) and AEC 1232

(semester 3), you should apply for the **Architectural Drafting Certificate** (p. 57)**.**

Fourth Semester		
AEC 2200	Building Design Development	3
AEC 2089	Capstone	3
ELECTIVE	Any AEC, CAD, or IND Course	3
PHYSICS	Conceptual Physics w/Lab (PHY 1105) or Higher	4
		Subtotal: 13

Total Credit Hours: 60
Important Program Notes:

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

ARCHITECTURAL DRAFTING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Architectural Drafting and enter the workforce. Students explore architectural drafting techniques, residential and commercial construction plans, and CAD software programs. This certificate program provides entry-level careers with architectural firms and builders with drafting and CAD skills and emphasizes foundation concepts in building information modeling (BIM).

First Semester		
AEC 1210	Basic Architectural Drafting	4
AEC 1520	Construction Materials and Systems	3
CAD 2220	Revit Architecture	3
		Subtotal: 10
Second Semester		
AEC 1231	Residential Construction Drawing	4
AEC 1232	Commercial Construction Drawing	4
		Subtotal: 8

Total Credit Hours: 18

ART HISTORY ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete the first two years of a bachelor's degree and transfer to a university to complete a BA in Art or Art History. Students explore hands-on and historical aspects of art. Careers often require a master's degree. Art History studies the way that art objects have changed over time, including their style, design, and materials. This program explores the major art forms, including painting, sculpture, and building design, as well as minor art forms, including furniture, ceramics, and decorative objects. This program introduces students to Art History and it includes courses that are common to all four-year institutions in Colorado. Career paths for Art History degree holders include museum and gallery management, government, media, research, and advanced university studies and careers. The Associate of Arts (AA) degree in Art History prepares students to complete the second half of a Bachelor of Arts (BA) or Bachelor of Fine Arts (BFA) in Art or Art History at a four-year university.

***Note:** The degree track in Art History with Secondary Teaching Licensure has different requirements and is not included in this agreement. Please refer to this agreement's cover page for the name of the Bachelor's degree at the four-year institution to which this agreement applies.*

First Semester		
ENG 1021	English Composition I: GT-CO1	3
ART 1111	Art History Ancient to Medieval: GT-AH1	3
ART 1201	Drawing I	3
GT- AH	HUM 1021/1022 or Any GT-AH	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 15
Second Semester		
ENG 1022	English Composition II: GT-CO2	3
ART 1112	Art History Renaissance to 1900: GT-AH1	3
ART 1002	Visual Concepts 2-D Design	3
GT- AH	HUM 1021/1022 or Any GT-AH	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 15
Third Semester		
GT- MA1	Math for Liberal Arts (MAT 1240) or Any GT-MA1	3
ART 1003	3-D Design	3
GT- HI1	HIS 1310/1320 or Any GT-HI1	3
GT- SC1	Any Science (GT-SC1) Course	4
GT- SS	GEO 1005, ANT 1001, or Any GT-SS	3
		Subtotal: 16
Fourth Semester		
GT- SC1/2	Any Science (GT-SC1/2) Course	3
ART 1113	Art History 1900 to Present: GT-AH1	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	2
GT- SS	GEO 1005, ANT 1001, or Any GT-SS	3
		Subtotal: 14

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) OR ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).**

Per the Statewide Transfer Articulation Agreement (STAA), if ART 1002, ART 1003, ART 1111, ART 1112, ART 1113 and/or ART 1201 **are not required for the major** at a receiving 4-year institution, they **will be applied to the Bachelor's degree as**

elective credit toward graduation. Please **check with the receiving institution** to determine in which these courses will be applied.

Per the Statewide Transfer Articulation Agreement (STAA), if you **are planning to transfer to CSU-FC**, you **will be required to complete 200-level foreign language** for completion of the BA in Art-Art History. You **will be expected to be prepared upon completion of the associate's degree to take an intermediate foreign language or be able to pass the CSU-FC Foreign Language placement exam** at the sophomore level. It **may not be possible to complete the BA in Art-Art History concentration** in two years without this prior foreign language competency.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Science courses (GT -SC1, GT-SC2).** One of these courses **must have the required laboratory (GT-SC1).**

If you **take MAT 1240 and/or more credits in science** than are listed, it **will reduce the 11 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

COMMUNICATION ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to earn an Associate of Arts degree (AA) by completing their first two years at a community college, and who plan to transfer to a university to complete the Bachelor of Arts (BA) in Communication. However, it should be noted that some students also transition directly and successfully into the workforce with their Communication AA. The field of Communication Studies, including all of the COM courses offered at our institution, explores a range of human communication contexts from public speaking, to interpersonal conversation, to work groups and teams, to co-cultures, to the media, to communication with ourselves, and many others. This program introduces students to the study and application of Communication, and includes courses that are common to four-year institutions in Colorado. Career paths for Communication degree holders include law, politics, teaching, business/non-profit, advertising, marketing, journalism, communication/social media directors, public relations, sales, and others.

Students intending to transfer to **Colorado State University-Ft. Collins** as a Communication Studies major should **contact an advisor immediately**. Students intending to transfer to other public universities in Colorado should follow the MAP below.

First Semester

COM 1150	Public Speaking	3
ENG 1021	English Composition I: GT-CO1	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
ELECTIVE	Any Approved Elective List Course	3
GT- MA1	Math for Liberal Arts (MAT 1240) or Any GT-MA1	3
		Subtotal: 15

Second Semester

COM 1250	Interpersonal Communication: GT-SS3	3
ENG 1022	English Composition II: GT-CO2	3
GT- SS	Any Social Sciences (GT-SS) Course	3
ELECTIVE	Any Approved Elective List Course	3
GT- HI1	Any History (GT-HI1) Course	3
		Subtotal: 15

Third Semester

COM 2300	Intercultural Communication: GT-SS3	3
COM 2220	Group Communication: GT-SS3	3
GT- SC1	Any Science (GT-SC1) Course	4
GT- AH	Any Arts & Humanities (GT-AH) Course	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 16

Note: COM 2220 has limited offerings, so students are encouraged to **take it as soon as they can**. If a student cannot fit this course into their schedule during Semester 3, they should **fulfill the required COM Elective and then prioritize taking COM 2220 in Semester 4**.

Fourth Semester

GT- SC1/2	Any Science (GT-SC1/2) Course	3
REQUIRED	Any Additional COM Course	3
REQUIRED	Any GT-SS or Any GT-HI1 Course	3
REQUIRED	Any GT-SS or Any GT-HI1 Course	3
ELECTIVE	Any Approved Elective List Course	2
		Subtotal: 14

Note: Please talk to an Advisor if you have questions regarding which COM Elective to take.

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), additional COM courses beyond COM 1150, COM 1250, and COM 2220, and any additional COM courses identified in the Additional Required Courses section of the Statewide Transfer Articulation Agreement, **may not count toward the Communication major** at the receiving 4-year institution. **See explanation in Limitations section of the Statewide Transfer Articulation Agreement.**

You **must take COM 2220 in either Semester 3 or Semester 4**. COM 2220 is **offered at Westminster Campus in fall semester** and **is offered at Boulder County Campus and Larimer Campus in spring semester.** If you are **unable to take COM 2220 in Semester 3, you should fulfill your COM Elective by taking COM 2250 or COM 1300 or COM 2270 or COM 2400 or COM 2200,** depending on campus offerings and **prioritize to take COM 2220 later.**

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Science**

courses (GT -SC1, GT-SC2). One of these courses **must have the required laboratory (GT-SC1).**

If you **take more credits in mathematics and science** than are listed, it **will reduce the 11 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Computer Aided Drafting

COMPUTER AIDED DRAFTING & DESIGN ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Computer Aided Drafting & Design and enter the workforce. Students explore all facets of CAD technician skills, techniques and software applications. With this CAD degree students will be prepared to enter the workforce as skilled CAD technicians. Students will graduate with advanced CAD skills by training on the most current CAD software. Students complete 2D and 3D projects with a career emphasis on the unique needs of small- to mid-sized companies seeking employees with advanced and specialized computer-aided drafting skills. Students may complete a Basic CAD certificate, enter the workforce, and then return at any time to upgrade specific skills while pursuing advanced certificate offerings or an AAS degree.

First Semester

CAD 1100	Print Reading for CAD	3
CAD 1101	Computer-Aided Drafting/2D I	3
CAD 1102	Computer-Aided Drafting/2D II	3
CAD 1110	Sketchup	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3

Subtotal: 15

Semester Note: Upon completion of CAD 1100, CAD 1101, CAD 1102, and CAD 1110, you **should apply for the Basic Computer-Aided Drafting Certificate** (p. 61)**.**

Second Semester

CAD 2400	Computer-Aided Drafting/3D	3
ELECTIVE	CAD 2210/2540/2220/2455 or Any CAD Course	3
ELECTIVE	Any CAD AAS Degree Elective*	3
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
ART 1201	Drawing I	3

Subtotal: 15

Semester Note: Upon completion of CAD 1110 and CAD 2210, you **should apply for the Sketchup Certificate** (p. 60)**.**

Third Semester

ELECTIVE	Advanced Sketchup (CAD 2210) or 3DS/MAX (CAD 2540)	3
CAD 2660	3D Printing	3
ELECTIVE	CAD 2694/2221/2456 or Any CAD Course	3
ELECTIVE	Any CAD AAS Degree Elective*	3
GEN EDU	Any CIS or MGD from Approved Elective List	3

Subtotal: 15

Semester Note: Upon completion of CAD 2455 and CAD 2456, you **should apply for the Solidworks Certificate** (p. 60)**.**

Upon completion of CAD 2220 and CAD 2221, you **should apply for the Revit Certificate** (p. 60)**.**

Fourth Semester

CAD 2080 or CAD 2089	Internship (2080) or Capstone (2089)	3
ELECTIVE	CAD 2661 or Any CAD Course	3
ELECTIVE	Any CAD AAS Degree Elective*	3
ELECTIVE	Any CAD Course	3
MATH	Career Mathematics (MAT 1140) or Higher	3

Subtotal: 15

Semester Note: Upon completion of CAD 1110, CAD 2660, CAD 2694, and CAD 2661 you should apply for the **3D Printing & 3D Scanning Certificate** (p. 59)**.**

Total Credit Hours: 60
Important Program Notes:

Computer Aided Drafting (CAD) AAS Degree Elective: Any CAD course (p. 186). You **may also select up to three courses (11 credit maximum)** from any AEC, EGG, EGT, or IND course. As well as any of the following courses: GIS 1001, GIS 1010, GIS 1031, HLT 1030, HLT 2030, MAC 1000, MAC 1001, MAC 1002, MAC 1010, MAC 1020.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Computer-Aided Drafting Certificates

3D PRINTING & 3D SCANNING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Computer Aided Drafting & Design 3D Printing & 3D Scanning and enter the workforce. Students explore all phases of 3D and AutoCAD software technology for 3D modeling, printing, and scanning. This certificate prepares students to be proficient in the use of 3D printing & 3D scanning software and technology using advanced

CAD modeling software specific to the industry of their choice. This program prepares students for entry-level career paths in various CAD department settings.

First Semester		
ELECTIVE	Sketchup (CAD 1110) or Solidworks/Mechanical (CAD 2455)	3
CAD 2660	3D Printing	3
CAD 2694	3D Scanning and Modeling	4
		Subtotal: 10
Second Semester		
CAD 2661	Advanced 3D Printing	3
		Subtotal: 3

Total Credit Hours: 13

Important Program Information:

You **may take CAD 2694** in either Semester One or Semester Two.

REVIT CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Revit and enter the workforce. Students explore Revit software skills and techniques. This certificate prepares students to become proficient in the advanced use of computer-aided drafting software as one of the leading BIM tools in the AEC industry. Prior proven discipline-specific content knowledge is required either in the form of architectural design skills or related industry work experience in order to successfully enroll and complete this software certificate. Career paths may include designer, drafter or modeler.

First Semester		
CAD 2220	Revit Architecture	3
		Subtotal: 3
Second Semester		
CAD 2221	Advanced Revit Architecture	3
		Subtotal: 3

Total Credit Hours: 6

SKETCHUP CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Sketchup and enter the workforce. Students explore Sketchup software skills and techniques. This certificate prepares students to become proficient in the use of computer-aided drafting software with a focus on 3D modeling and renderings. Career paths may include architect, drafter, designer, planner or project manager.

First Semester		
CAD 1110	Sketchup	3
		Subtotal: 3
Second Semester		
CAD 2210	Advanced Sketchup	3
		Subtotal: 3

Total Credit Hours: 6

SOLIDWORKS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Solidworks and enter the workforce. Students explore Solidworks software skills and techniques. This certificate prepares students to become proficient in the advanced use of computer-aided drafting software as one of the leading parametric solid modelers in the mechanical engineering and manufacturing industry. Prior proven discipline-specific content knowledge is required either in the form of mechanical engineering design skills or related industry work experience in order to successfully enroll and complete this software certificate. Career paths may include drafting, engineering, manufacturing, architecture, and design positions.

First Semester		
CAD 2455	SolidWorks/Mechanical	3
		Subtotal: 3
Second Semester		
CAD 2456	Advanced Solidworks	3
		Subtotal: 3

Total Credit Hours: 6

BASIC COMPUTER-AIDED DRAFTING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Computer Aided Drafting & Design Basic CAD and enter the workforce. Students explore CAD print reading, 2D, and 3D modeling software skills and techniques. With this certificate students will become proficient in the latest release of AutoCAD software and learn the basics of Google Sketchup®. This certificate prepares students for career paths in public and private company CAD settings.

First Semester

CAD 1100	Print Reading for CAD	3
CAD 1101	Computer-Aided Drafting/2D I	3
CAD 1102	Computer-Aided Drafting/2D II	3
CAD 1110	Sketchup	3
		Subtotal: 12

Total Credit Hours: 12

Important Program Notes:

Take these courses in the fall semester to complete the certificate.

ENGLISH ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in English with Literature emphasis. Students gain literature and writing expertise. Careers often require a BA degree or higher. English Literature explores many different opinions, worldviews, and interesting times and places. Students will read some of the great books and poems and discuss a variety of characters, plots, themes, and styles. Studying successful writers allows students to expand their own writing abilities, recognize key issues, and improve their own writing style and voice. This program introduces students to Literature, and it includes courses that are common to all four-year institutions in Colorado. Career paths for English Literature degree holders include media, public relations, law, marketing, advertising, and teaching. The Associate of Arts (AA) degree in English Literature prepares students to complete the second half of a Bachelor of Arts in English (BA) at a four-year university.

First Semester

ENG 1021	English Composition I: GT-CO1	3
REQUIRED	LIT 1015 or Any LIT Prefix Course from GT-AH2	3
REQUIRED	COM 1150/1250/2250	3
GT- SS	SOC 1001, PSY 1001, or Any GT-SS	3
GT- AH	PHI 1011, HUM 1015, THE 1005, or Any GT-AH	3
		Subtotal: 15

Second Semester

REQUIRED	Any 2000-Level Literature GT-AH2 Course	3
ENG 1022	English Composition II: GT-CO2	3
GT- HI1	Any History (GT-HI1) Course	3
GT- MA1	Math for Liberal Arts (MAT 1240) or Any GT-MA1	3
GT- SS	SOC 1001, PSY 1001, or Any GT-SS	3
		Subtotal: 15

Third Semester

REQUIRED	Any 2000-Level Literature GT-AH2 Course	3
ELECTIVE	ENG 2021 or Any Approved Elective List Course	3
REQUIRED	Any 2000-Level Literature GT-AH2 Course	3
GT- SC1	Any Science (GT-SC1) Course	4
GT- AH	PHI 1011, HUM 1015, THE 1005, or Any GT-AH	3
		Subtotal: 16

Fourth Semester

REQUIRED	Any 2000-Level Literature GT-AH2 Course	3
ELECTIVE	ENG 2021 or Any Approved Elective List Course	3
GT- SC1/2	Any Science (GT-SC1/2) Course	3
GT- AH	PHI 1011, HUM 1015, THE 1005, or Any GT-AH	3
ELECTIVE	Any Approved Elective List Course	2
		Subtotal: 14

Total Credit Hours: 60

Important Program Notes:

You **should contact an advisor if you receive a "C" or lower** in any ENG or LIT course.

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and ENG 2001 (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), if COM 1150 or COM 1250 and any of the five LIT courses **are not required for the major** at the receiving 4-year institution, they **will be applied to the Bachelor's degree as elective credit** toward graduation. Please **check with the receiving institution** to determine in which way these courses will be applied.

Per the Statewide Transfer Articulation Agreement, Creative Writing I (ENG 2021) **is a "Recommended Elective" course.**

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Science courses**

(GT -SC1, GT-SC2). One of these courses **must have the required laboratory (GT-SC1).**

If you **take more credits in mathematics and science** than are listed, it **will reduce the 8 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

FRENCH ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in French or Modern Languages. Students explore French language and culture. As a foreign language student, they will be prepared to be a responsible citizen, educated worker and culturally prepared for a world that is based on international partnerships. Students will experience classes that are more than lectures because they employ modern learning approaches and techniques. Our innovative and creative instructors will work closely to help each student with language appreciation and acquisition while helping them to master grammatical written work and linguistics. This program is designed for students wanting to complete the first two years of a bachelor's degree and transfer to a university to complete a BA in French or Modern Languages. Careers typically require a bachelor's degree.

First Semester

FRE 1011	French Language I	5
ENG 1021	English Composition I: GT-CO1	3
GT- MA1	Math for Liberal Arts (MAT 1240) or Any GT-MA1	3
GT- HI1	HIS 1310/1320/1110/1120 or Any GT-HI1	3
		Subtotal: 14

Second Semester

ENG 1022	English Composition II: GT-CO2	3
FRE 1012	French Language II	5
ELECTIVE	Any Approved Elective List Course	3
GT- SS	Any Social & Behavioral Science (GT-SS) Course	3
ELECTIVE	Any Approved Elective List Course	1
		Subtotal: 15

Semester Note: Per the Statewide Transfer Articulation Agreement (STAA), it **is recommended, but not required, that a student take either COM 1150 or COM 1250**. French faculty **recommend you confirm** with the transfer institution if they accept COM 1250.

If you **took MAT 1240 in Semester 1**, you **do not need to take the 1 credit** Any Approved Elective List Course in Semester 2.

Third Semester

FRE 2011	French Language III: GT-AH4	3
GT- SC1/2	Any Science (GT-SC1/2) Course	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 15

Fourth Semester

FRE 2012	French Language IV: GT-AH4	3
GT- SC1	Any Science (GT-SC1) Course	4
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 16

Total Credit Hours: 60

Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), FRE 1011 and/or FRE 1012 **can be waived** at Front Range Community College by a **demonstration of proficiency through completion of the Prior Learning Assessment process**. You **should consult a department advisor** at the four-year college or university.

Per the Statewide Transfer Articulation Agreement (STAA), if FRE 1011 and/or FRE 1012 **are not required for the major** at a receiving 4-year institution, they **will be applied to the Bachelor's degree as elective credit** toward graduation. Please **check with the receiving institution** to determine in which way these courses will be applied.

CSU-Ft. Collins **requires two non-US history courses**. **Select one course** to meet the requirement for GT-HI1 and **one** to meet the Electives requirement in order to accomplish this requirement by CSU.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Science courses (GT -SC1, GT-SC2).** One of these courses **must have the required laboratory (GT-SC1).**

If you take MAT 1240, as preferred by the Statewide Transfer Articulation Agreement (STAA), and/or **more credits in science** than are listed, it **will reduce the 19 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Interior Architecture and Design

INTERIOR ARCHITECTURE AND DESIGN ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Interior Architecture and Design and enter the workforce. Students explore the design processes, theories, spatial organization, creative elements and skills necessary for successful interior environments. This degree provides students an in-depth study of architecture, CAD, and interior design skills necessary for a career as an interior designer and/or kitchen and bath designer. Students learn to develop creative abilities through the study of visual elements and principles of design. They learn to prepare design graphics through sketching, manual drafting, and computer-generated presentation drawings. For more information regarding the National Council for Interior Design Qualification (NCIDQ) examination please visit: https://www.cidq.org/paths

First Semester

AEC 1200	Print Reading Residential/Commercial	3
IND 1101	Introduction to Interior Design	3
IND 1102	History of Interior Design	3
IND 1103	Communication in Design	1
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
IND 2203	Space Planning	3
	Subtotal: 16	

Semester Note: Upon completion of AEC 1200, IND 1101, IND 1102, and IND 1103, and IND 2201 you **should apply for the Fundamentals in Interior Design, Drafting & Communication Certificate** (p. 64)**.**

Second Semester

IND 2207	Interior Design II	3
IND 2201	Graphic Communication	4
MATH	Career Mathematics (MAT 1140) or Higher	3
CAD 2220	Revit Architecture	3
ART 1801	Fiber Design I	3
	Subtotal: 16	

Third Semester

IND 2204	Estimating Interior Materials	3
IND 2078	Workshop	4
GENERAL EDUCATION	Personal Finance (BUS 1016), Introduction to PC Applications (CIS 1018), Any Art (ART), Any Communication (COM), Any World Language Course (1001 or higher), or Any GT Pathways Course	3
IND 2501	Kitchen and Bath Design	4
IND 2088	Practicum	3
	Subtotal: 17	

Fourth Semester

IND 2704	Interior Design IV	3
IND 2702	IND Portfolio Presentations	3
CAD 2221	Advanced Revit Architecture	3
IND 2089	Capstone	4
GENERAL EDUCATION	Personal Finance (BUS 1016), Introduction to PC Applications (CIS 1018), Any Art (ART), Any Communication (COM), Any World Language Course (1001 or higher), or Any GT Pathways Course	3
	Subtotal: 16	

Semester Note: Upon completion of AEC 1200, IND 1101, IND 1103, IND 2201, IND 2203, IND 1088, IND 1078, IND 2501, IND 2502, IND 2701, IND 2204, and IND 2080 you **should apply for the Kitchen & Bath Design Certificate** (p. 63)**.**

Total Credit Hours: 65
Important Program Notes:

You **must complete a minimum of 65 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

KITCHEN & BATH DESIGN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Kitchen & Bath Design and enter the workforce. Students explore overall kitchen and bath design processes, materials, AutoCAD software skills, and space planning principles. Students will complete a four-credit internship working under the direction of the Program Director at a design firm or design-related company in northern Colorado. Career path options include becoming a designer in a kitchen and bath or interior design business setting. Past internships have included Hixon Interiors, Eheart Interior Solutions, Earthwoods, and HighCraft Builders. Successful completion of the Interior Design degree fulfills the education requirement to take the NCIDQ (National Council for Interior Design Qualification) exam to become a professional interior designer. Work experience is needed, so please consult an Advisor.

First Semester

AEC 1200	Print Reading Residential/Commercial	3
IND 1101	Introduction to Interior Design	3
IND 1103	Communication in Design	1
IND 2203	Space Planning	3

IND 2501	Kitchen and Bath Design	4
IND 1088 or IND 1078	Practicum (IND 1088) or Seminar (IND 1078)	1
		Subtotal: 15

Second Semester

IND 2201	Graphic Communication	4
IND 2204	Estimating Interior Materials	3
IND 2502	Advanced Kitchen & Bath Design	4
IND 2701	Professional Practice for Interior Designers	2
IND 2080	Internship	4
		Subtotal: 17

Semester Note: To enroll in IND 2080, you **must have a GPA of 3.0 or approval from the Program Director**.

Total Credit Hours: 32

FUNDAMENTALS IN INTERIOR DESIGN, DRAFTING & COMMUNICATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Fundamentals in Interior Design, Drafting & Communication and enter the workforce. Students explore architectural drafting techniques, CAD software skills, communication and design principles. This certificate teaches students fundamental skills used in interior design, drafting and graphic communication. Career opportunities include administrative support in retail, vendor and manufacturer showrooms, manufacturer representatives for products, assistants to interior architects, designers and project managers.

First Semester

AEC 1200	Print Reading Residential/Commercial	3
IND 1101	Introduction to Interior Design	3
IND 1102	History of Interior Design	3
IND 1103	Communication in Design	1
IND 2201	Graphic Communication	4
		Subtotal: 14

Upon completion of this semester and courses, you will earn your **Fundamentals in Interior Design, Drafting & Communication certificate**.

Total Credit Hours: 14

Multimedia Technology

DIGITAL ANIMATION ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Digital Animation and enter the workforce. Students explore basic design concepts, basic and advanced drawing techniques, story boarding, and 3D animation technology. This digital media degree gives students the foundation to go into a variety of career fields, from traditional advertising agencies to design agencies to video production companies to web production companies. Students learn how to use industry-standard design software and learn about typography, images, and the creative process involved in designing graphics that clearly present information. Our digital media degree program also includes a series of art courses to give students a solid foundation in the core of graphic design.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1017	Intro to Visual Communications	3
MGD 1019	Maya I	3
MGD 1053	3D Animation I	3
		Subtotal: 15

Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1019, and MGD 1053, you **should apply for the Fundamentals in Multimedia Technology Certificate** (p. 70)**.**

Second Semester

MGD 1042	Digital Animatics	3
MGD 1067	Game Design I	3
MGD 1043	Motion Graphic Design I (Software)	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
MGD 2053	3D Animation II	3
		Subtotal: 15

Semester Note: Campus offerings vary by semester for Motion Graphic Design I (MGD 1043) and After Effects I (MGD 1065). You should take the course when it is offered at your desired campus location either in semester 2 or semester 3.

Third Semester

MGD 1065	After Effects I	3
ELECTIVE	MGD 2011/2012/1064/2043 or Any MGD Prefix	3
ART 1002	Visual Concepts 2-D Design	3
ART 1201	Drawing I	3
MATH	Career Mathematics (MAT 1140) or Higher	3
		Subtotal: 15

Semester Note: Campus offerings vary by semester for Motion Graphic Design I (MGD 1043) and After Effects I (MGD 1065). You should take the course when it is offered at your desired campus location either in semester 2 or semester 3

Campus offerings vary by semester for Animation Production (MGD 2057) and Game Design II (MGD 2067). You should take the course when it is offered at your desired campus location in semester 3 or semester 4.

Fourth Semester

GENERAL EDUCATION	Intro to Business (BUS 1015), Intro to PC Applications (CIS 1018), Intro to Programming (CSC 1019), Any ART,	3

	Any COM, or Any World Language (1001 or higher), or Any GT Pathways Course	
MGD 2067	Game Design II	3
MGD 2057	Animation Production	3
ELECTIVE	MGD 2011/2012/1064/2043 or Any MGD Prefix	3
MGD 2068	Business for Creatives	3
		Subtotal: 15

Semester Note: Campus offerings vary by semester for Animation Production (MGD 2057) and Game Design II (MGD 2067). You should take the course when it is offered at your desired campus location in semester 3 or semester 4.

MGD 2068 must be taken in your last two semesters.

Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1019, MGD 1042, MGD 1053, MGD 1067, MGD 2053, MGD 2068, and one course from: MGD 1043 or MGD 1065, you **should apply for the Digital Animation Certificate** (p. 67)**.**

Total Credit Hours: 60
Important Program Notes:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with your main campus scheduling.**

The Digital Animation Associates of Applied Science (AAS) Degree **is valued with higher regard** as it requires more education to obtain than a certificate. As such, it is recommended that interested students declare the AAS Degree as the overall goal. Students declaring the AAS Degree **will also complete the Fundamentals of Multimedia Certificate as well as a certificate in the chosen focus area** by the time of graduation.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

GRAPHIC DESIGN ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Graphic Design and enter the workforce. Students explore the traditional aspects of graphic design and print materials, digital illustrations, photography, and dynamic page layouts. This digital media degree gives students the foundation to go into a variety of career fields, from traditional advertising agencies to design agencies to video production companies to web production companies. Students learn how to use industry-standard design software and learn about typography, images, and the creative process involved in designing graphics that clearly present information. Our digital media degree program also includes a series of art courses to give students a solid foundation in the core of graphic design.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1013	Adobe InDesign	3
MGD 1017	Intro to Visual Communications	3
MGD 1033	Graphic Design I	3
		Subtotal: 15

Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1013, MGD 1017, and MGD 1033, you **should apply for the Fundamentals in Multimedia Technology Certificate** (p. 70).

Second Semester

MGD 1014	Typography I	3
MGD 1020	Intro to Production Design	3
MGD 2033	Graphic Design II	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
MGD 2011 or MGD 2012 or MGD 2002	Adobe Photoshop II (MGD 2011) or Adobe Illustrator II (MGD 2012) or Point of Purchase Package Design (MGD 2002)	3
		Subtotal: 15

Third Semester

ART 1201	Drawing I	3
ART 1002	Visual Concepts 2-D Design	3
ELECTIVE	MGD 1041/1043/1053/1064/1065/1067, Any MGD Prefix, ART 1401/2401	3
MGD 2011 or MGD 2012 or MGD 2002	Adobe Photoshop II (MGD 2011) or Adobe Illustrator II (MGD 2012) or Point of Purchase Package Design (MGD 2002)	3
GENERAL EDUCATION	Intro to Business (BUS 1015), Intro to PC Applications (CIS 1018), Intro to Programming (CSC 1019), Any ART, Any COM, or Any World Language (1001 or higher), or Any GT Pathways Course	3
		Subtotal: 15

Fourth Semester

MATH	Career Mathematics (MAT 1140) or Higher	3
ELECTIVE	MGD 1041/1043/1053/1064/1065/1067, Any MGD Prefix, ART 1401/2401	3
ELECTIVE	MGD 2003/2011/2012/2002/2056/2059 or Any MGD Prefix	3
ELECTIVE	MGD 2003/2011/2012/2002/2056/2059 or Any MGD Prefix	3
MGD 2068	Business for Creatives	3
		Subtotal: 15

Semester Note: MGD 2068 must be taken in your last two semesters.

Upon completion of MGD 1011, MGD 1012, MGD 1017, and **two courses** from: MGD 1014, MGD 1013, MGD 1033, MGD 1019, MGD 1020, MGD 1041, MGD 1043, MGD 1053, MGD 1064, MGD 1004, ART 1401, or ART 2405, you **should apply for the Fundamentals in Multimedia Certificate** (p. 70)**.**

Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1033, MGD 1020, MGD 1014, MGD 1013, MGD 2033, MGD 2068 and one course from: MGD 2011, MGD 2012, or MGD 2002, you **should apply for the Graphic Design Certificate** (p. 68)**.**

Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1013, MGD 1020, MGD 1041, MGD 2011, MGD 2068, either: MGD 1063 or MUS 1063, and one course from: MGD 1043, MGD 1053, MGD 1064, or MGD 2056, MGD 2012, MGD 2059, or ART 1401, you **should apply for the Multimedia Certificate** (p. 69)**.**

Total Credit Hours: 60
Important Program Information:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with their main campus scheduling.**

The Graphic Design Associates of Applied Science (AAS) Degree is valued with higher regard as it **requires more education to obtain than a certificate**. As such, it is **recommended that interested students declare the AAS Degree** as the overall goal. Students declaring the AAS Degree **will also complete the Fundamentals of Multimedia Certificate as well as a certificate in the chosen focus area by the time of graduation**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

VIDEO PRODUCTION & EDITING ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Video Production & Editing and enter the workforce. Students explore video editing for television and commercial applications, production of interactive CDs, and original video production. This digital media degree gives students the foundation to go into a variety of career fields, from traditional advertising agencies to design agencies to video production companies to web production companies. Students learn how to use industry-standard design software and learn about typography, images, and the creative process involved in designing graphics that clearly present information. Our digital media degree program also includes a series of art courses to give students a solid foundation in the core of graphic design.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1017	Intro to Visual Communications	3
MGD 1004	Videography	3
MGD 1064	Digital Video Editing I	3
		Subtotal: 15

Semester Note: Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1004, and MGD 1064, you **should apply for the Fundamentals in Multimedia Technology Certificate** (p. 70)**.**

Second Semester

MGD 1014	Typography I	3
MGD 1063 or MUS 1063	Sound Design I (MGD 1063) or Music Audio Production I (MUS 1063)	3
MGD 2004	Videography II	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
MGD 2064	Digital Video Editing II	3
		Subtotal: 15

Third Semester

ART 1201	Drawing I	3
MGD 1065	After Effects I	3
ART 1002	Visual Concepts 2-D Design	3
MATH	Career Mathematics (MAT 1140) or Higher	3
MGD 1043	Motion Graphic Design I (Software)	3
		Subtotal: 15

Fourth Semester

GENERAL EDUCATION	Intro to Business (BUS 1015), Intro to PC Applications (CIS 1018), Intro to Programming (CSC 1019), Any ART, Any COM, or Any World Language (1001 or higher), or Any GT Pathways Course	3
ELECTIVE	MGD 2011/2012/2043/2059 or Any MGD Prefix Course	3
ELECTIVE	MGD 2011/2012/2043/2059 or Any MGD Prefix Course	3
ELECTIVE	MGD 2011/2012/2043/2059 or Any MGD Prefix Course	3
MGD 2068	Business for Creatives	3
		Subtotal: 15

Semester Note: MGD 2068 must be taken in your last two semesters.

Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1064, MGD 1004, MGD 1014, MGD 2064, MGD 2004, MGD 2068, and either: MGD 1063 or MUS 1063, you **should apply for the Video Production and Editing Certificate** (p. 69).

Total Credit Hours: 60
Important Program Notes:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with their main campus scheduling.**

The Video Production & Editing Associates of Applied Science (AAS) Degree is valued with higher regard as it **requires more education to obtain than a certificate**. As such, it is **recommended that interested students declare the AAS Degree** as the overall goal. Students declaring the AAS Degree **will also complete the Fundamentals of Multimedia Certificate as well as a certificate in the chosen focus area by the time of graduation**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

WEB DESIGN ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Web Design and enter the workforce. Students explore web and multimedia design, including web design, web programming, web animation, and video editing. This digital media degree gives students the foundation to go into a variety of career fields, from traditional advertising agencies to design agencies to video production companies to web production companies. Students learn how to use industry-standard design software and learn about typography, images, and the creative process involved in designing graphics that clearly present information. Our digital media degree program also includes a series of art courses to give students a solid foundation in the core of graphic design.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1017	Intro to Visual Communications	3
MGD 1041	Web Design I	3
MGD 1043	Motion Graphic Design I (Software)	3
	Subtotal: 15	

Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1041, and MGD 1043, you **should apply for the Fundamentals in Multimedia Technology Certificate** (p. 70)**.**

Second Semester

MGD 2043	Web Motion Graphic Design II	3
MGD 1064	Digital Video Editing I	3
MGD 2041	Web Design II	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
MATH	Career Mathematics (MAT 1140) or Higher	3
	Subtotal: 15	

Third Semester

ART 1201	Drawing I	3
MGD 1013	Adobe InDesign	3
ART 1002	Visual Concepts 2-D Design	3
ELECTIVE	MGD 2011/2012/2058 or Any MGD Prefix	3
GENERAL EDUCATION	Intro to Business (BUS 1015), Intro to PC Applications (CIS 1018), Intro to Programming (CSC 1019), Any ART, Any COM, or Any World Language (1001 or higher), or Any GT Pathways Course	3
	Subtotal: 15	

Semester Note: Campus offerings vary by semester for Adobe InDesign (MGD 1013), Typography I (MGD 1014) and Graphic Design I (MGD 1033). You should take the course when it is offered at your desired campus location either in semester 3 or semester 4.

Fourth Semester

MGD 1014	Typography I	3
MGD 1033	Graphic Design I	3
ELECTIVE	MGD 2011/2012/2058 or Any MGD Prefix	3
ELECTIVE	MGD 2011/2012/2058 or Any MGD Prefix	3
MGD 2068	Business for Creatives	3
	Subtotal: 15	

Semester Note: Campus offerings vary by semester for Adobe InDesign (MGD 1013), Typography I (MGD 1014) and Graphic Design I (MGD 1033). You should take the course when it is offered at your desired campus location either in semester 3 or semester 4.

MGD 2068 must be taken in your last two semesters.

Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1041, MGD 1043, MGD 1064, MGD 2041, MGD 2043, MGD 2068, and 3 elective credits from MGD 1013 / MGD 1014 / MGD 1033, you **should apply for the Web Design Certificate** (p. 70)**.**

Total Credit Hours: 60
Important Program Notes:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with your main campus scheduling.**

The Web Design Associates of Applied Science (AAS) Degree is valued with higher regard as it **requires more education to obtain than a certificate**. As such, it is **recommended that interested students declare the AAS Degree** as the overall goal. Students declaring the AAS Degree **will also complete the Fundamentals of Multimedia Certificate as well as a certificate in the chosen focus area by the time of graduation**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Multimedia Technology Certificates

DIGITAL ANIMATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Digital Animation and enter the workforce. Students explore the features, skills and techniques of digital animation software. This certificate

program prepares students for entry-level career positions dealing with the production of interactive presentations, medical illustration, gaming, web animation, and cartooning. 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.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1017	Intro to Visual Communications	3
MGD 1019	Maya I	3
MGD 1053	3D Animation I	3
	Subtotal: 15	

Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1019, and MGD 1053, you **should apply for the Fundamentals in Multimedia Technology Certificate** (p. 70)**.**

Second Semester

MGD 1042	Digital Animatics	3
MGD 1067	Game Design I	3
ELECTIVE	Motion Graphic Design I (MGD 1043) or After Effects I (1065)	3
MGD 2053	3D Animation II	3
MGD 2068	Business for Creatives	3
	Subtotal: 15	

Semester Note: MGD 2068 must be taken in your last two semesters.

You **should apply for completion of the Digital Animation Certificate at the end of Semester 2**.

Total Credit Hours: 30
Important Program Notes:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with your main campus scheduling.**

The Design Animation Associates of Applied Science (AAS) Degree **is valued with higher regard** as it requires more education to obtain than a certificate. As such, it is recommended that interested students declare the AAS Degree as the overall goal. Students declaring the AAS Degree **will also complete the Fundamentals of Multimedia Certificate as well as a certificate in the chosen focus area** by the time of graduation.

DIGITAL IMAGING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Digital Imaging and enter the workforce. Students explore visual communications, fine art, design, camera, video and photo processes. This certificate program prepares students for entry-level career positions in digital photo labs, newspaper photo departments, and graphic design production. Students work independently, as well as in collaborative groups in the design and implementation of mixed media presentations and applications.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1017	Intro to Visual Communications	3
ART 1401	Digital Photography I	3
ELECTIVE	MGD 1004/1033/1064/2004/2059/2064, ART 1115/1404/2405, or JOU 1021	3
	Subtotal: 15	

Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1017, ART 1401, and 3 credits of courses (**select one** course from MGD 1004, MGD 1064, ART 2405, or JOU 1021), you **should apply for the Fundamentals in Multimedia Technology Certificate** (p. 70)**.**

Second Semester

MGD 2011	Adobe Photoshop II	3
ART 2401	Digital Photography II	3
ELECTIVE	MGD 1004/1033/1064/2004/2059/2064, ART 1115/1404/2405, or JOU 1021	3
ELECTIVE	MGD 1004/1033/1064/2004/2059/2064, ART 1115/1404/2405, or JOU 1021	3
MGD 2068	Business for Creatives	3
	Subtotal: 15	

Semester Note: MGD 2068 must be taken in your last two semesters.

You **should apply for completion of the Digital Imaging Certificate at the end of Semester 2**.

Total Credit Hours: 30
Important Program Notes:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with your main campus scheduling.**

GRAPHIC DESIGN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Graphic Design and enter the workforce. Students explore graphic design software programs, techniques, theories and industry principles. This certificate program prepares students for entry-level career positions in digital and graphics firms. Students work independently, as well as in collaborative groups in the design and implementation of mixed media presentations and applications.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1013	Adobe InDesign	3
MGD 1017	Intro to Visual Communications	3
MGD 1033	Graphic Design I	3
	Subtotal: 15	

Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1033, and MGD 1013, you **should apply for the Fundamentals in Multimedia Technology Certificate** (p. 70)**.**

Second Semester

MGD 1020	Intro to Production Design	3
MGD 1014	Typography I	3
MGD 2033	Graphic Design II	3
ELECTIVE	MGD 2011/2012/2002 or Any MGD Prefix	3
MGD 2068	Business for Creatives	3
	Subtotal: 15	

Semester Note: MGD 2068 must be taken in your last two semesters.

Upon completion of MGD 1011, MGD 1012, MGD 1013, MGD 1033, MGD 1017, MGD 1020, MGD 1014, MGD 2033, MGD 2068, and your choice of one elective from Any MGD Prefix, you **should apply for the Graphic Design Certificate**.

Total Credit Hours: 30
Important Program Notes:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with your main campus scheduling.**

The Graphic Design Associates of Applied Science (AAS) Degree **is valued with higher regard** as it requires more education to obtain than a certificate. As such, it is recommended that interested students declare the AAS Degree as the overall goal. Students declaring the AAS Degree **will also complete the Fundamentals of Multimedia Certificate as well as a certificate in the chosen focus area** by the time of graduation.

MULTIMEDIA CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Multimedia and enter the workforce. Students explore graphic design software programs, visual communication, and production principles. This certificate program prepares students for entry-level career work as a generalist in digital media. Students work independently, as well as in collaborative groups in the design and implementation of mixed media presentations and applications.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1017	Intro to Visual Communications	3
MGD 1013	Adobe InDesign	3
MGD 1020	Intro to Production Design	3
	Subtotal: 15	

Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1014, and MGD 1020, you **should apply for the Fundamentals in Multimedia Technology Certificate** (p. 70).

Second Semester

MGD 1041	Web Design I	3
MGD 2011	Adobe Photoshop II	3
ELECTIVE	Sound Design I (MGD 1063) or Music Audio Production I (MUS 1063)	3
ELECTIVE	MGD 1043/1053/1064/2056/2012/2059 or ART 1401	3
MGD 2068	Business for Creatives	3
	Subtotal: 15	

Semester Note: MGD 2068 must be taken in your last two semesters.

You **should apply for completion of the Multimedia Certificate at the end of Semester 2**.

Total Credit Hours: 30
Important Program Notes:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with your main campus scheduling.**

VIDEO PRODUCTION AND EDITING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Video Production & Editing and enter the workforce. Students explore video-related software programs, production, digital editing, audio, sound and effects techniques. This certificate program prepares students for entry-level career positions in companies involved in video production, editing, and designing. Students work independently as well as in collaborative groups in the design and implementation of mixed media presentations and applications.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1017	Intro to Visual Communications	3
MGD 1064	Digital Video Editing I	3
MGD 1004	Videography	3
	Subtotal: 15	

Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1004, and MGD 1064 course, you **should apply**

for the Fundamentals in Multimedia Technology Certificate (p. 70)**.**

Second Semester

MGD 1014	Typography I	3
ELECTIVE	Sound Design I (MGD 1063) or Music Audio Production I (MUS 1063)	3
MGD 2064	Digital Video Editing II	3
MGD 2004	Videography II	3
MGD 2068	Business for Creatives	3
	Subtotal: 15	

Semester Note: MGD 2068 must be taken in your last two semesters.

You **should apply for completion of the Video Production and Editing Certificate at the end of Semester 2**.

Total Credit Hours: 30
Important Program Notes:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with your main campus scheduling.**

The Video Production and Editing Associates of Applied Science (AAS) Degree **is valued with higher regard** as it requires more education to obtain than a certificate. As such, it is recommended that interested students declare the AAS Degree as the overall goal. Students declaring the AAS Degree **will also complete the Fundamentals of Multimedia Certificate as well as a certificate in the chosen focus area** by the time of graduation.

WEB DESIGN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Web Design and enter the workforce. Students explore web design software programs, graphic and interface design principles, and site architecture. This certificate program prepares students for entry-level career positions with companies involved in web design. Students learn current web coding languages and techniques and create a website. Students work independently, as well as in collaborative groups in the design and implementation of mixed media presentations and applications.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1017	Intro to Visual Communications	3
MGD 1041	Web Design I	3
MGD 1043	Motion Graphic Design I (Software)	3
	Subtotal: 15	

Semester Note: Upon completion of MGD 1011, MGD 1012, MGD 1017, MGD 1041, and MGD 1043, you **should apply for the Fundamentals in Multimedia Technology Certificate** (p. 70)**.**

Second Semester

ELECTIVE	MGD 1013/1014/1033	3
MGD 1064	Digital Video Editing I	3
MGD 2041	Web Design II	3
MGD 2043	Web Motion Graphic Design II	3
MGD 2068	Business for Creatives	3
	Subtotal: 15	

Semester Note: MGD 2068 must be taken in your last two semesters.

You **should apply for completion of the Web Design Certificate at the end of Semester 2**.

Total Credit Hours: 30
Important Program Notes:

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with your main campus scheduling.**

The Web Design Associates of Applied Science (AAS) Degree **is valued with higher regard** as it requires more education to obtain than a certificate. As such, it is recommended that interested students declare the AAS Degree as the overall goal. Students declaring the AAS Degree **will also complete the Fundamentals of Multimedia Certificate as well as a certificate in the chosen focus area** by the time of graduation.

FUNDAMENTALS IN MULTIMEDIA TECHNOLOGY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Fundamentals in Multimedia Technology and enter the workforce. Students explore a range of multimedia, visual communications and software applications. This certificate provides a basic overview of the field and teaches basic multimedia skills. To enhance skills and career options, students are advised to pursue an additional certificate and/or an AAS degree in Digital Animation, Graphic Design, Video Production and Editing, or Web Design. Students work independently, as well as in collaborative groups in the design and implementation of mixed media presentations and applications.

First Semester

MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1017	Intro to Visual Communications	3
ELECTIVE	Any Fundamentals in MGD Certificate Elective*	3
ELECTIVE	Any Fundamentals in MGD Certificate Elective*	3
	Subtotal: 15	

Semester Note: You **should apply for completion of the Fundamentals of Multimedia Certificate** at the end of Semester 1.

Total Credit Hours: 15
Important Program Notes:

***Fundamentals in Multimedia Technology (MGD) Certificate Electives include: MGD 1004, MGD 1013, MGD 1014, MGD 1019, MGD 1020, MGD 1033, MGD 1041, MGD 1043, MGD 1053, MGD 1064, ART 1401, or ART 2405.**

Scheduling **may vary per campus locations.** You **are encouraged to register for courses in accord with your main campus scheduling.**

The Multimedia Technology Associates of Applied Science (AAS) Degree is valued with higher regard as it requires more education to obtain than a certificate. As such, it is **recommended that interested students declare the AAS Degree as the overall goal**. Students declaring the AAS Degree **will also complete the Fundamentals of Multimedia Certificate as well as a certificate in the chosen focus area by the time of graduation.**

Music and Recording Arts Technology

MUSIC ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in Music. Students explore music theory, history, and application. Music, as in all the arts, is an expression and transcendence of the human experience. Music courses serve as an introduction into the examination of sound as a vibrant art form and provide training in performance and composition. The music department offers humanities and performance classes open to all students from beginning through advanced. Our faculty will help students explore their talents and invigorate their passion in music. This program is designed for students wanting to complete the first two years of a bachelor's degree and transfer to a university to complete a BA in Music. Careers typically require a bachelor's degree.

First Semester

ENG 1021	English Composition I: GT-CO1	3
MUS 1010	Music Theory I	3
MUS 1012	Ear Training/Sight-Singing I Lab	1
MUS 1031	Music Class I (Guitar, Piano or Voice)	2
MUS 1041	Private Instruction	1-2
MUS 1051	Ensemble I	1
MUS 1021	Music History Medieval - Classical: GT-AH1	3

Subtotal: 14

Semester Note: It is important to **contact Music Faculty for advising, assessment, and placement**. For MUS 1010 and MUS 1012, faculty **recommend you take MUS 1000 as preparation** if you have limited experience in music notation, and this **will count as your music elective.**

Second Semester

ENG 1022	English Composition II: GT-CO2	3
MUS 1011	Music Theory II	3
MUS 1013	Ear Training/Sight-Singing II Lab	1
MUS 1042	Private Instruction II	1-2
MUS 1052	Ensemble II	1
MUS 1022	Music History Romantic - Present: GT-AH1	3
GT- MA1	Math for Liberal Arts (MAT 1240) or Any GT-MA1	3

Subtotal: 15

Third Semester

MUS 2010	Music Theory III	3
MUS 2012	Ear Training/Sight-Singing Lab III	1
MUS 2051	Ensemble I	1
MUS 2041	Private Instruction	1-2
GT- SS	PSY 1001 or Any GT-SS	3
GT- HI1	HIS 1310/1320/1110/1120 or Any GT-HI1	3
GT- SC1	Any Science (GT-SC1) Course	4

Subtotal: 16

Fourth Semester

MUS 2011	Music Theory IV	3
MUS 2013	Ear Training/Sight-Singing Lab IV	1
MUS 2052	Ensemble II	1
MUS 2042	Private Instruction	1-2
GT- SS	PSY 1001 or Any GT-SS	3
MUSIC	MUS 1023/1025/1061/1063/1067	3
GT- SC1/2	Any Science (GT-SC1/2) Course	3

Subtotal: 15

Total Credit Hours: 60
Important Program Notes:

It is important to **contact Music Faculty for advising, assessment, and placement**. For MUS 1010 and MUS 1012, faculty **recommend you take MUS 1000 as preparation** if you have limited experience in music notation, and this **will count as your music elective.**

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), CSU-Fort Collins **requires that one of Social & Behavioral Sciences courses be PSY 1001.**

Per the Statewide Transfer Articulation Agreement (STAA), if credits **are not required for the major** at a receiving 4-institution, they **will be applied to the bachelor's degree** as elective credit toward graduation. Please **check with the receiving institution** to determine in which way these courses (MUS 1010, MUS 1011, MUS 2010, MUS 2011, MUS 1012, MUS 1013, MUS 2012, MUS 2013, MUS 1051, MUS 1052, MUS 2051, MUS 2052, MUS 1041, MUS 1042, MUS 2041, MUS 2042, and MUS 1031) will be applied.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Science courses (GT-SC1, GT-SC2).** One of these courses **must have the required laboratory (GT-SC1).**

If you **take private instruction music courses (MUS 1041, MUS 1042, MUS 2041, or MUS 2042) from more than 1 credit,** it **will reduce the 3 credits of Music electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

RECORDING ARTS TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Recording Arts Technology and enter the workforce. Students explore music theory, history, sight-singing, music computer applications and audio. Students build digital literacy skills in audio recording, digital editing, audio production, audio post production, live sound engineering, and film, theater, and video sound production. This program develops the knowledge and skills for entry level career options in the music recording and entertainment industry including copyright, labels, publishing, licensing, distribution, marketing, finance, and legal settings.

First Semester

MUS 1010	Music Theory I	3
MUS 1012	Ear Training/Sight-Singing I Lab	1
REQUIRED	Music Class I-IV, Ensemble I-IV, and/or Private Instruction I-IV	1
ENGLISH	Composition I/II (ENG 1021/1022) or Technical Writing (ENG 1031)	3
MUS 1061	Computer Music Applications I	3
MUS 1063	Music Audio Production I	3
		Subtotal: 14

Semester Note: It is important to **contact Music Faculty for advising, assessment, and placement**. For MUS 1010 and MUS 1012, faculty **recommend you take MUS 1000 as preparation** if you have limited experience in music notation, and this **will count as your music elective.**

If you **select a 2-credit course to fulfill your music requirement this semester,** additional credits completed in Music Classes I-IV, Ensemble I-IV, and/or Private Instruction I-IV **will reduce the number of electives required to complete this degree. You must complete the Music Requirement (2 credits) and Music Electives (8 credits) to earn the Recording Arts AAS degree.**

Second Semester

MUS 1011	Music Theory II	3
MUS 1013	Ear Training/Sight-Singing II Lab	1
MUS 1062	Computer Music Applications II	3
MUS 1064	Music Audio Production II	3
PSY 1001	General Psychology I: GT-SS3	3
MATH	Career Mathematics (MAT 1140) or Any GT-MA1	3
		Subtotal: 16

Third Semester

MUS 1067	Music Business I	3
MUS 1023	Survey of World Music: GT-AH1	3
PHY 1105	Conceptual Physics w/Lab: GT-SC1	4
COM 2300	Intercultural Communication: GT-SS3	3
ELECTIVE	Any Music Course	2
		Subtotal: 15

Fourth Semester

REQUIRED	Music Class I-IV, Ensemble I-IV, and/or Private Instruction I-IV	1
MUS 2065	Live Audio Engineering	3
MUS 1026	History of Rock and Pop	3
MUS 2084 or MUS 2089	Internship (MUS 2084) or Capstone (MUS 2089)	2
ELECTIVE	Any Music Course	2
ELECTIVE	Any Music Course	2
ELECTIVE	Any Music Course	2
		Subtotal: 15

Semester Note: Upon completion of MUS 1061, MUS 1063, MUS 2065, and MUS 2084/MUS 2089, you **should apply for the Foundations of Recording Arts Technology Certificate** (p. 73)**.**

Upon completion of MUS 1010, MUS 1012, MUS 1061, MUS 1063, MUS 1067, MUS 1062, MUS 1064, MUS 2065, MUS 2084/MUS 2089, Music Requirement* (2 credits of any combination of **Music Class I-IV** and/or **Private Instruction I-IV** and/or **Ensemble I-IV,** and 2 credits of electives from any MUS course, you **should apply for the Recording Arts Technology Certificate** (p. 73)**.**

Total Credit Hours: 60
Important Program Notes:

Music Requirement: You **must complete two credits from a combination** of the following: **Music Class I-IV** (MUS 1031, MUS 1032, MUS 2031, MUS 2032), and/or **Private Instruction I-IV** (MUS 1041, MUS 1042, MUS 1043, MUS 1044, MUS 2041, MUS 2042, MUS 2043, MUS 2044), and/or **Music Ensemble I-IV** (MUS 1051, MUS 1052, MUS 1053, MUS 1054, MUS 2051, MUS 2052, MUS 2053, MUS 2054) **to complete the music requirement for the Recording Arts Technology AAS Degree**.

You must complete the Music Requirement (2 credits) and Music Electives (8 credits) to earn the Recording Arts Technology AAS degree.

If you take more than 2 credits in Music Class I-IV, Ensemble I-IV, and/or Private Instruction I-IV, these additional credits will be applied to the electives reducing the number of elective credits required to complete this degree.

You should not repeat a course once successfully completed. Each Music (MUS) course can only be applied once to fulfill degree requirements.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress**.**

Recording Arts Technology Certificates

RECORDING ARTS TECHNOLOGY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Music Recording Arts Technology and enter the workforce. Students explore music theory, computer music applications, audio production and engineering, and an overview of the music business. This certificate program prepares students for careers in music industry studios where they learn digital literacy skills, including audio recording, digital editing, audio production and post production, live sound engineering, and film, theater and video sound production.

First Semester

MUS 1010	Music Theory I	3
MUS 1012	Ear Training/Sight-Singing I Lab	1
MUS 1061	Computer Music Applications I	3
MUS 1063	Music Audio Production I	3
MUS 1067	Music Business I	3
REQUIRED	Music Class I-IV, Ensemble I-IV, and/or Private Instruction I-IV	1

Subtotal: 14

Semester Note: It is important to **contact Music Faculty for advising, assessment, and placement**. For MUS 1010 and MUS 1012, faculty **recommend you take MUS 1000 as preparation** if you have limited experience in music notation, and this **will count as your music elective** currently **listed** below **in semester 2.**

If you **select a 2-credit course to fulfill your music requirement this semester,** additional credits completed in Music Classes I-IV, Ensemble I-IV, and/or Private Instruction I-IV **will reduce the number of electives required to complete this certificate. You must complete the Music Requirement (2 credits) and Music Electives (2 credits) to earn the Recording Arts Technology Certificate.**

Second Semester

MUS 1062	Computer Music Applications II	3
MUS 1064	Music Audio Production II	3
MUS 2065	Live Audio Engineering	3
REQUIRED	Music Class I-IV, Ensemble I-IV, and/or Private Instruction I-IV	1
ELECTIVE	Any Music Course	2
MUS 2084 or MUS 2089	Internship (MUS 2084) or Capstone (MUS 2089)	2

Subtotal: 14

Total Credit Hours: 28

Important Program Notes:

Music Requirement: You **must complete two credits from a combination** of the following: **Music Class I-IV** (MUS 1031, MUS 1032, MUS 2031, MUS 2032), and/or **Private Instruction I-IV** (MUS 1041, MUS 1042, MUS 1043, MUS 1044, MUS 2041, MUS 2042, MUS 2043, MUS 2044), and/or **Music Ensemble I-IV** (MUS 1051, MUS 1052, MUS 1053, MUS 1054, MUS 2051, MUS 2052, MUS 2053, MUS 2054) **to complete the music requirement for the Recording Arts Technology Certificate**.

You must complete the Music Requirement (2 credits) and Music Electives (8 credits) to earn the Recording Arts Technology certificate.

If you take more than 2 credits in Music Class I-IV, Ensemble I-IV, and/or Private Instruction I-IV, these additional credits will be applied to the electives reducing the number of elective credits required to complete this certificate. You **must complete 28 credits** to earn your Recording Arts Technology Certificate. You **may want to check with your Pathways Advisor** to monitor your completion progress and select your electives.

You should not repeat a course once successfully completed. Each Music (MUS) course can only be applied once to fulfill degree requirements.

FOUNDATIONS OF RECORDING ARTS TECHNOLOGY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Foundations of Recording Arts Technology and enter the workforce. Students explore computer music applications, audio production and engineering concepts and skills. This certificate is ideal for elementary and secondary music teachers who need to learn about recording arts technology/sound engineering. The program is designed for students who are working full-time and/or attending school part-time. All credits can be applied to the Recording Arts Technology certificate.

First Semester

MUS 1061	Computer Music Applications I	3
MUS 1063	Music Audio Production I	3

Subtotal: 6

Second Semester

MUS 2065	Live Audio Engineering	3
MUS 2084 or MUS 2089	Internship (MUS 2084) or Capstone (MUS 2089)	2

Subtotal: 5

Total Credit Hours: 11

PHILOSOPHY ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in Philosophy. Students explore hidden meanings behind everyday life. Careers often require a master's degree or higher. Philosophy explores human ideas and problems, such as life, reality, values, knowledge, understanding, and language. It has many areas and the content involves many places, cultures, and periods of history. This program introduces students to the field of Philosophy and it includes courses that are common to all four-year institutions in Colorado. Career paths for Philosophy degree holders include law, government, business, science, teaching, and advanced university studies. The Associate of Arts (AA) degree in Philosophy prepares students to complete the second half of a Bachelor of Arts (BA) in Philosophy at a four-year university.

First Semester

PHI 1011	Introduction to Philosophy: GT-AH3	3
GT- HI1	The Middle Ages (HIS 2300), 20th Century World History (HIS 2015), or Any GT-HI1	3
ENG 1021	English Composition I: GT-CO1	3
ELECTIVE	Medieval-Modern Civilization (HUM 1022), World Mythology (HUM 1015), or Any Approved Elective List Course	3
GT- AH1,2,4	World Literature to 1600 (LIT 2001), World Literature After 1600 (LIT 2002), or Any GT-AH1, 2, or 4	3

Subtotal: 15

Semester Note: You **may take PHI 1012 and PHI 1013** in either Semester 1 or Semester 2. The Larimer campus strongly **recommends that PHI 1013 be taken first semester** and no later than second semester. The Boulder and Westminster campuses **recommend that PHI 1013 be taken in the second semester**. **See Philosophy faculty or advisors** for more information.

Either Logic (PHI 1013) or Symbolic Logic (PHI 2013) **may be completed to fulfill the logic requirement**. Symbolic Logic (PHI 2013) **is preferred at Colorado State University, Metropolitan State University of Denver, University of Colorado Boulder, and University of Colorado Denver.**

Second Semester

PHI 1012	Ethics: GT-AH3	3
PHI 1013 Or PHI 2013	Logic (PHI 1013) or Symbolic Logic (PHI 2013)	3
ENG 1022	English Composition II: GT-CO2	3
GT- AH1,2,4	Music History: Medieval-Classical (MUS 1021), Romantic-Present (MUS 1022), or Any GT-AH1, 2, or 4	3
GT- MA1	Math for Liberal Arts (MAT 1240) or Any GT-MA1	3

Subtotal: 15

Semester Note: You **may take PHI 1012 and PHI 1013** in either Semester 1 or Semester 2. The Larimer campus strongly **recommends that PHI 1013 be taken first semester** and no later than second semester. The Boulder and Westminster campuses **recommend that PHI 1013 be taken in the second semester**. **See Philosophy faculty or advisors** for more information.

Either Logic (PHI 1013) or Symbolic Logic (PHI 2013) **may be completed to fulfill the logic requirement.** Symbolic Logic (PHI 2013) **is preferred at Colorado State University, Metropolitan State University of Denver, University of Colorado Boulder, and University of Colorado Denver.**

Third Semester

PHI 2005 Or PHI 2014 Or PHI 2018 Or PHI 2020	Business Ethics (PHI 2005), Philosophy of Religion (PHI 2014), Environmental Ethics (PHI 2018), or Philosophy Death & Dying (PHI 2020)	3
ELECTIVE	Women & Social Action (WST 2100) or Any Approved Elective List Course	3
GT- SS	Psychology-Death & Dying (PSY 2222) or Any GT-SS	3
GT- SC1/2	Environmental Science with Lab (ENV 1111) or Any GT-SC1/2	3
PHI 2005 Or PHI 2014 Or PHI 2018 Or PHI 2020	Business Ethics (PHI 2005), Philosophy of Religion (PHI 2014), Environmental Ethics (PHI 2018), or Philosophy Death & Dying (PHI 2020)	3

Subtotal: 15

Fourth Semester

ELECTIVE	PHI 1014/1015/1016/2005/2014/2018/2022 or Any Approved Elective List Course	3
ELECTIVE	Cultural Anthropology (ANT 1001) or Any Approved Elective List Course	3
GT- SS	Human Geography (GEO 1006) or Any GT-SS	3
GT- SC1	Biological Anthropology (ANT 1005) or Any GT-SC1	4
ELECTIVE	Any Approved Elective List Course	2

Subtotal: 15

Total Credit Hours: 60

Important Program Notes:

It is recommended that you meet with Philosophy Faculty to discuss your destination college and guidance regarding philosophy and religious study courses.

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), you **are required to take 15 credits of Philosophy courses**. PHI 1011, PHI 1012, and PHI 1013/PHI 2013 are required. You **may choose two courses from PHI 2005, PHI 2014, PHI 2018, or PHI 2020.** Any Philosophy courses taken in addition to the 15 credits **may transfer as degree elective credits to your 4-year institution**, which are necessary to complete a bachelors. Please **see your advisor and check with your transfer**

institution for details on how credits will transfer and be applied.

Per the Statewide Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Science courses (GT-SC1, GT-SC2).** One of these courses **must have the required laboratory (GT-SC1).**

If you take more credits in mathematics and science than are listed, it **will reduce the 14 credits of electives needed.**

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

SPANISH ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in Spanish or Modern Languages. Students explore Spanish language and culture. Careers typically require a bachelor's degree. Spanish is not just about words and grammar; it is also about new sounds, expressions, and ways of seeing things. It is learning about other cultures. Depending on how long students study and how much they practice, they can reach different levels of Spanish fluency. With an AA degree in Spanish, students should be able to reach an Intermediate-Low to Intermediate-Mid ability according to the American Council on the Teaching of Foreign Languages. This program introduces students to the study of Spanish and it includes courses that are common to all four-year institutions in Colorado. Career paths for foreign language degree holders include the medical, dental, legal, educational, and public service professions. The Associate of Arts (AA) degree in Spanish prepares students to complete the second half of a Bachelor of Arts (BA) in Spanish at a four-year university.

First Semester

SPA 1011	Spanish Language I	5
ENG 1021	English Composition I: GT-CO1	3
GT- MA1	MAT 1240/1340 or Any GT-MA1	3
REQUIRED	Public Speaking (1150)/Interpersonal Communication (1250)	3
		Subtotal: 14

Second Semester

SPA 1012	Spanish Language II	5
ENG 1022	English Composition II: GT-CO2	3
GT- HI1	History of Latin America (HIS 2200) or Any Non-US GT-HI1	3
GT- SS	Any Social & Behavioral Science (GT-SS) Course	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 17

Note: Spanish faculty **recommend any world language** with a course number of 1001, 1002, 1011, or 1012 in ARA, ASL, CHI, FRE, GER, ITA, JPN, RUS, or SPA**.**

Suggested courses are 2000-level Spanish courses and **courses outside the Spanish department** with content related to the Spanish-speaking world. If you have a higher proficiency level than is required for SPA 2011 or SPA 2012, you **should substitute other Arts & Humanities courses**. Heritage speakers **may want to substitute SPA 2061 (Grammar-Heritage Lang Speaker) and SPA 2062 (Comp-Heritage Lang Speaker)** if available**.**

Third Semester

SPA 2011	Spanish Language III: GT-AH4	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
GT- SS	Any Social & Behavioral Science (GT-SS) Course	3
ELECTIVE	Any Approved Elective List Course	3
GT- SC1/2	Any Science (GT-SC1/2) Course	3
		Subtotal: 15

Note: Spanish faculty **recommend any world language** with a course number of 1001, 1002, 1011, or 1012 in ARA, ASL, CHI, FRE, GER, ITA, JPN, RUS, or SPA.

Suggested courses are 2000-level Spanish courses and **courses outside the Spanish department** with content related to the Spanish-speaking world. If you have a higher proficiency level than is required for SPA 2011 or SPA 2012, you **should substitute other Arts & Humanities courses**. Heritage speakers **may want to substitute SPA 2061 (Grammar-Heritage Lang Speaker) and SPA 2062 (Comp-Heritage Lang Speaker)** if available**.**

Fourth Semester

SPA 2012	Spanish Language IV: GT-AH4	3
GT- SC1	Any Science (GT-SC1) Course	4
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	1
		Subtotal: 14

Note: Spanish faculty **recommend any world language** with a course number of 1001, 1002, 1011, or 1012 in ARA, ASL, CHI, FRE, GER, ITA, JPN, RUS, or SPA.

Suggested courses are 2000-level Spanish courses and **courses outside the Spanish department** with content related to the Spanish-speaking world. If you have a higher proficiency level than is required for SPA 2011 or SPA 2012, you **should substitute other Arts & Humanities courses**. Heritage speakers **may want to substitute SPA 2061 (Grammar-Heritage Lang Speaker) and SPA 2062 (Comp-Heritage Lang Speaker)** if available.

Total Credit Hours: 60

Important Program Notes

Per the Statewide Transfer Articulation Agreement (STAA), SPA 1011 and/or SPA 1012 **may be waived**, based on your proficiency level. You **should consult a department advisor** at the four-year college or university.

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) OR ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).**

When you **are selecting elective courses from the Approved Elective List,** the Statewide Transfer Articulation Agreement

(STAA) **suggests 2000-level Spanish courses and courses outside the Spanish department with content related to the Spanish-speaking world.**

Per the Statewide Transfer Articulation Agreement (STAA), if you **have a higher proficiency level than is required for SPA 2011 or SPA 2012,** you **should substitute other Arts & Humanities courses.** Heritage speakers **may want to substitute SPA 2061 (Grammar-Heritage Lang Speaker) and SPA 2062 (Comp-Heritage Lang Speaker),** if available.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Science courses (GTSC1, GT-SC2).** One of these courses **must have the required laboratory (GT-SC1).**

If you **take Math for Liberal Arts (MAT 1240) or College Algebra (MAT 1340) and more science credits than are listed**, it **will reduce the 13 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

STUDIO ART ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in Fine Art or Arts. Students explore studio techniques and historical aspects of art. Careers often require a master's degree. Studio Art teaches students both how to make art and understand how it is made. Students will study drawing, painting, ceramics, and photography in detail. This program introduces students to the study of Studio Art and includes courses that are common to all Colorado four-year institutions. Career paths for Studio Art degree holders include museum and gallery management, building design, media, art restoration, and education. The Associate of Arts (AA) Degree with Designation in Studio Art prepares students to complete the second half of a Bachelor of Arts (BA) or Bachelor of Fine Arts (BFA) in Art or Art History at a four-year university.

Note: *The degree track in Studio Art with Secondary Teaching Licensure has different requirements and is not included in this agreement. Please refer to this agreement's cover page for the name of the Bachelor's degree at the four-year institution to which this agreement applies.*

First Semester

ENG 1021	English Composition I: GT-CO1	3
ART 1111	Art History Ancient to Medieval: GT-AH1	3
ART 1201	Drawing I	3
ART 1002	Visual Concepts 2-D Design	3
GT- AH	LIT 1015, HUM 1021/1022, PHI 1011/1012/1013, or Any GT-AH	3
	Subtotal: 15	

Second Semester

ENG 1022	English Composition II: GT-CO2	3
ART 1112	Art History Renaissance to 1900: GT-AH1	3
ART 1003	3-D Design	3
ART 1202 or ART 1203	Drawing II (ART 1202) or Figure Drawing (ART 1203)	3
GT- AH	LIT 1015, HUM 1021/1022, PHI 1011/1012/1013, or Any GT-AH	3
	Subtotal: 15	

Third Semester

GT- MA1	Math for Liberal Arts (MAT 1240) or Any GT-MA1	3
GT- SC1	Any Science (GT-SC1) Course	4
GT- SS	GEO 1005, ANT 1001, or Any GT-SS	3
REQUIRED	Any Studio Art Course	3
ELECTIVE	Any Approved Elective List Course	3
	Subtotal: 16	

Fourth Semester

GT- SC1/2	Any Science (GT-SC1/2) Course	3
GT- HI1	HIS 1310/1320 or Any GT-HI1	3
GT- SS	GEO 1005, ANT 1001, or Any GT-SS	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	2
	Subtotal: 14	

Total Credit Hours: 60

Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), if ART 1002, ART 1111, ART 1112, ART 1113, and/or ART 1201 **are not required for the major** at a receiving 4-year institution, they **will be applied to the Bachelor's degree as elective credit** toward graduation. Please **check with the receiving institution** to determine in which these courses will be applied.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Science courses (GTSC1, GT-SC2).** One of these courses **must have the required laboratory (GT-SC1).**

If you **take Math for Liberal Arts (MAT 1240) and/or more credits in science** than are listed, it **will reduce the 8 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Manufacturing, Automotive & Construction Technology

This Career and Academic Community includes the following programs: Architectural Engineering & Construction Technology, Automation & Engineering Technology, Automotive Technology, Computer-Aided Drafting & Design, Construction Trades, Electronics Engineering Technology, Heating, Ventilation, Air Conditioning & Refrigeration, Interior Architecture & Design, Precision Machining Technology, Optics Technology, and Welding Technology. To learn more about the program click on the program below.

APPLIED TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program aligns with a statewide articulation agreement that allows Area Technical College (ATC) graduates at Technical College of the Rockies, Emily Griffith Technical College and Pickens Technical College to transfer up to 45 credits of transfer credit from a certificate program approved by the State Board for Community Colleges & Occupational Education (SBCCOE) toward the completion of an AAS degree in Applied Technology. This degree requires the completion of at least 60 credits with at least 15 credits completed at FRCC and selected from the Approved Elective List.

First Semester

MATH	Career Mathematics (MAT 1140) or Higher	3
GEN EDU	Any Approved Elective List Course	12
		Subtotal: 15

Total Credit Hours: 60
Important Program Notes:

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Automation and Engineering Technology

AUTOMATION & ENGINEERING TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Automation & Engineering Technology and enter the workforce. Students explore industries requiring automation, robotics, process control, electro-mechanical, and related troubleshooting skills. This AAS degree program focuses on preparing students for entry-level technician careers with hands-on interaction with devices and systems including electric motors and their controls, solenoids and relays, fluid power systems and controls, pumps and valves, PLCs, industrial robots, sensors and actuators, and other components. Career paths include electro-mechanical technician, robotics technician, automation technician, process and instrumentation technician, industrial maintenance technician, or quality assurance technician. Crossover skills may qualify students for avionics or manufacturing production technician positions.

First Semester

MTE 1102	Safety Manufacturing Environment	1
MTE 1100	Print Reading for Manufacturing	3
MAC 1001	Introduction to Machine Shop	3
MATH	MAT 1150/1340/1420/1400/1440/2410 or Higher	3
ELT 1206	Fundamentals of DC/AC	4
		Subtotal: 14

Semester Note: ELT 1206 **is offered in fall semesters.**

If the student cannot take all of the First Semester courses, they **should take the recommended math course**, otherwise they will not be able to complete the program in 2 years.

Upon completion of MTE 1102, MTE 1100, MAC 1001, MAT 1150 or higher, and ELT 1206, you **should apply for the Manufacturing Fundamentals Certificate** (p. 78)**.**

Second Semester

ELT 2254	Industrial Wiring	3
ELT 2252	Motors and Controls	3
GEN EDU	COM 1150/1250 or MTE 1110	3
EIC 1271	Maintenance Management	1
MIL 1001	Lifting Devices	1
MTE 2320	Fluid Power Control	3
IMA 1500	Industrial Rotating Equipment	3
		Subtotal: 17

Semester Note: Upon completion of MTE 1102, MTE 1100, MAC 1001, MATH (MAT 1150 or higher), ELT 1206 (semester 1) and ELT 2254, ELT 2252, EIC 1271, MIL 1001, MTE 2320, and IMA 1500 (semester 2), you should apply for **your Industrial Maintenance Certificate** (p. 78)**.**

Third Semester

MTE 2220	Lean Six Sigma	4
ELT 2358	Programmable Logic Controllers	3
HVA 2035	Specialty Refrigeration Units	4
EIC 2330	Instrument & Process Control II	4
		Subtotal: 15

Semester Note: The Industrial Automation and Robotics Certificate **cannot be started** until you have completed the Industrial Maintenance Technology Certificate.

Fourth Semester

PHYSICS	Conceptual Physics w/Lab (PHY 1105) or Higher	4
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
CIS 1018	Introduction to PC Applications	3
ELT 2368	Robotics Technologies	3
ELT 2367	Introduction to Robotics	1
CAPSTONE	Internship (MTE/ELT 2080) or Capstone (MTE 2089)	1
		Subtotal: 15

Semester Note: Upon completion of MTE 2220, ELT 2358, HVA 2035, EIC 2330 (semester 3) and ELT 2368 and ELT 2367 (semester 4), you should apply for **your Industrial Automation and Robotics Certificate** (p. 78)**.**

Total Credit Hours: 61
Important Program Notes:

Automation & Engineering Technology cohort **begins in the Fall semester.**

If you take MAT 1150 or more credits in mathematics than are listed, it **will increase the total credits for the degree**.

You **must complete a minimum of 61 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

INDUSTRIAL MAINTENANCE CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two semester Certificate in Industrial Maintenance Technology and enter the workforce. This is the second in a series of three stackable certificates. During the first semester students study manufacturing fundamentals such as safety, print reading, basic machining, and electrical fundamentals. The second semester engages students in an intensive hands-on study of industrial wiring and control cabinets, hydraulic and pneumatic fluid power systems, safe rigging practices, preventive maintenance and documentation, and mechanical power transmission systems. Students who complete this certificate are prepared to enter the workforce as industrial maintenance technicians.

First Semester

MTE 1102	Safety Manufacturing Environment	1
MTE 1100	Print Reading for Manufacturing	3
MAC 1001	Introduction to Machine Shop	3
MATH	MAT 1150/1340/1420/1400/1440/2410 or Higher	3
ELT 1206	Fundamentals of DC/AC	4
		Subtotal: 14

Semester Note: ELT 1206 **is offered in fall semesters.**

Upon completion of MTE 1102, MTE 1100, MAC 1001, MAT 1150 or higher (p. 235)**, and ELT 1206, you should apply for the Manufacturing Fundamentals Certificate** (p. 78)**.**

Second Semester

ELT 2254	Industrial Wiring	3
ELT 2252	Motors and Controls	3
EIC 1271	Maintenance Management	1
MIL 1001	Lifting Devices	1
MTE 2320	Fluid Power Control	3
IMA 1500	Industrial Rotating Equipment	3
		Subtotal: 14

Total Credit Hours: 28
Important Program Notes:

If you take MAT 1150 or more credits in mathematics than are listed, it **will increase the total credits for the degree.** You **must complete 28 credits** to earn your Industrial Maintenance Certificate. You **should not exceed 29 credits.** You **may want to check with your advisor** to monitor your completion progress and select your electives.

Industrial Maintenance Certificate cohort **begins in the fall semester.**

INDUSTRIAL AUTOMATION AND ROBOTICS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year Certificate in Industrial Automation & Robotics and enter the workforce. This is the last in a series of three stackable certificates. This certificate is created for students who want to learn the basics of automated systems as applied in the manufacturing industries. Students study Programmable Logic Controllers, process control and automation, industrial robotics, as well as principles of lean manufacturing. This program prepares students for entry-level careers as industrial automation and robotics technicians.

First Semester

MTE 2220	Lean Six Sigma	4
ELT 2358	Programmable Logic Controllers	3
HVA 2035	Specialty Refrigeration Units	4
EIC 2330	Instrument & Process Control II	4
		Subtotal: 15

Second Semester

ELT 2368	Robotics Technologies	3
ELT 2367	Introduction to Robotics	1
		Subtotal: 4

Total Credit Hours: 19
Important Program Notes:

The Industrial Automation and Robotics Certificate (19 credits) **cannot be started** until the student has mastered competencies found in the Industrial Maintenance Technology Certificate (p. 78) (28 credits).

The Industrial Automation and Robotics Certificate cohort **begins in the fall semester.**

MANUFACTURING FUNDAMENTALS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one semester Certificate in Manufacturing Fundamentals and enter the workforce. It is the first in a series of three stackable certificates. Students prepare for entry-level positions as production operators/assemblers with courses in shop safety, print reading, basic hand tools and metrology, technical mathematics, and electrical fundamentals. Career paths with additional certificates include automation technician, robotics technician, industrial maintenance technician, process and instrumentation technician, or electro-mechanical technician. Crossover skills may qualify students for positions in electronics or aviation assembly positions.

First Semester

MTE 1102	Safety Manufacturing Environment	1
MTE 1100	Print Reading for Manufacturing	3
MAC 1001	Introduction to Machine Shop	3
MATH	MAT 1150/1340/1420/1400/1440/2410 or Higher	3
ELT 1206	Fundamentals of DC/AC	4
	Subtotal: 14	

Semester Note: ELT 1206 **is offered in fall semesters.**

Total Credit Hours: 14
Important Program Notes:

If you take MAT 1150 or more credits in mathematics than are listed, it **will increase the total credits for the certificate.** You **must complete 14 credits** to earn your Manufacturing Fundamental Certificate. You **should not exceed 15 credits.** You **may want to check with your advisor** to monitor your completion progress and select your electives.

Manufacturing Fundamentals Certificate cohort **begins in the fall semester.**

Automotive Technology

AUTOMOTIVE TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Automotive Technology and enter the workforce. Students explore automobile systems repair and maintenance. This AAS degree provides students with entry-level 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, drivetrains, brakes and alignment, and fuel and emission controls. This degree prepares students for career paths with automotive repair shops and dealerships and contains one or more embedded certificates which can be awarded when the certificate requirements are completed. Accredited by the ASE Education Foundation.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Automotive Electricity	2
ASE 1023	Starting and Charging Systems	2
ASE 1030	General Engine Diagnosis	2
ASE 1040	Suspension and Steering I	2
ASE 1010	Automotive Brake Service I	2
ASE 1011	Automotive Brake Service II	2
ASE 2050	Automatic Transmission/Transaxle Service	1
MATH	Career Mathematics (MAT 1140) or Higher	3
	Subtotal: 18	

Semester Note: Upon completion of all the courses shown above, you should apply for the **General Automotive Maintenance & Repair Certificate** (p. 81)**.**

Standardized testing scores or assessment testing in mathematics is **highly recommended for all students.** Please see a Pathways Advisor for guidance selecting the right mathematics course for you. **You must complete MAT 1140** (p. 236) **or higher to meet the mathematics requirements for this program.**

Second Semester

ASE 1041	Suspension and Steering II	2
ASE 1060	Automotive Engine Repair	2
ASE 1062	Automotive Engine Service & Repair	2
ASE 2191	Automotive & Diesel Body Electrical	3
ASE 2095	Heating & Air Conditioning Systems	3
PHYSICS	Conceptual Physics w/Lab (PHY 1150) or Higher	4
	Subtotal: 16	

Semester Note: For Westminster Campus students, **y**ou **must complete first semester prior to taking the courses in this semester.** The courses offered in this semester require pre-requisites. You are **not able to begin your program in this semester** regardless if you are a morning or afternoon student.

Upon completion of ASE 1002, ASE 1020, and ASE 2095, you **should apply for the Automotive Heating & Air Conditioning Certificate** (p. 82)**.**

Third Semester

ASE 1091	Automotive Engine Repair & Rebuild	4
ASE 2010	Automotive Power & ABS Brake Systems	2
ASE 1034	Automotive Fuel & Emissions Systems I	2
ASE 2192	Automotive Computers & Ignition Systems	3
ASE 2193	Auto Fuel Injection & Emissions Systems II	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
	Subtotal: 17	

Semester Note: Upon completion of ASE 1002, ASE 1020, ASE 1030, ASE 1060, ASE 1091, and ASE 1062, you **should apply for the Engine Repair Certificate** (p. 80)**.**

Upon completion of ASE 1002, ASE 1020, ASE 1023, ASE 1030, ASE 1034, ASE 2192, and ASE 2193, you **should apply for the Engine Performance Certificate** (p. 80)**.**

Upon completion of ASE 1002, ASE 1020, ASE 1023, ASE 2191, and ASE 2192, you **should apply for the Automotive Electrical/Electronic Systems Certificate** (p. 81)**.**

Upon completion of ASE 1002, ASE 1020, ASE 1010, ASE 1011, and ASE 2010, you **should apply for the Brakes Certificate** (p. 81)**.**

Fourth Semester

ASE 2194	Suspension & Steering III	3
ASE 1050	Manual Drive Train & Axle Maintenance	2
ASE 1051	Man Trans/Transaxles/Clutches I	2
ASE 1092	Manual Transmission, Transaxles, Clutches II	3
ASE 2051	Automotive Transmission & Transaxle Repair	3
COM 1150 or COM 1250 or MTE 1110	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250) or Applied Communication & Teamwork in Industry (MTE 1110)	3
CIS 1018 or LANGUAGE or GT PATHWAYS	Introduction to PC Applications (CIS 1018), Any World Language Course (1001 or higher), or Any GT Pathways Course	3
	Subtotal:	**19**

Semester Note: Upon completion of ASE 1002, ASE 1020, ASE 1040, ASE 1041, and ASE 2194, you **should apply for the Suspension & Steering Certificate** (p. 82)**.**

Upon completion of ASE 1002, ASE 1050, ASE 1092, ASE 2050, and ASE 2051, you **should apply for the Automatic Transmission Transaxle Certificate** (p. 81)**.**

Upon completion of ASE 1002, ASE 1020, ASE 1050, ASE 1051, and ASE 1092, you **should apply for the Manual Drivetrain & Axles Certificate** (p. 82)**.**

Total Credit Hours: 70
Important Program Notes:

Standardized testing scores or assessment testing in mathematics is **highly recommended for all students.** Please see a Pathways Advisor for guidance selecting the right mathematics course for you. **You must complete MAT 1140 or higher to meet the mathematics requirements for this program.**

You **must complete a minimum of 70 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Automotive Certificates

ENGINE PERFORMANCE CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Engine Performance and enter the workforce. Students explore the diagnosis procedures necessary to troubleshoot automotive system repairs. This certificate program provides students with an overview of electrical systems, general engine diagnosis, ignition systems diagnosis and repair, emissions systems, fuel injection, and exhaust systems. Students use diagnostic scan tools, oscilloscopes, lab scopes, multi-meters and gas analyzers to diagnose live vehicle drivability problems. This certificate prepares students for career paths with automotive repair shops and dealerships. This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Automotive Electricity	2
ASE 1023	Starting and Charging Systems	2
ASE 1030	General Engine Diagnosis	2
	Subtotal:	**8**

Second Semester

ASE 1034	Automotive Fuel & Emissions Systems I	2
ASE 2192	Automotive Computers & Ignition Systems	3
ASE 2193	Auto Fuel Injection & Emissions Systems II	3
	Subtotal:	**8**

Total Credit Hours: 16

ENGINE REPAIR CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Engine Repair and enter the workforce. Students explore automotive engine disassembly and reassembly procedures for repair. This program focuses on the removal and installation procedures of the automotive engine from and into front-wheel and rear-wheel drive vehicles. Students will disassemble, diagnose, and reassemble an automotive engine. Topics include the diagnostic and repair procedures for the engine block and head assemblies. This certificate prepares students for career paths with automotive repair shops and dealerships.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Automotive Electricity	2
ASE 1030	General Engine Diagnosis	2
	Subtotal:	**6**

Second Semester

ASE 1060	Automotive Engine Repair	2
ASE 1062	Automotive Engine Service & Repair	2
ASE 1091	Automotive Engine Repair & Rebuild	4

Subtotal: 8

Total Credit Hours: 14

AUTOMOTIVE ELECTRICAL/ELECTRONIC SYSTEMS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two semester Certificate in Automotive Electrical/Electronic Systems and enter the workforce. Students explore all phases of automotive electrical, circuit, wiring, starting and charging systems. This certificate program teaches students the operation, testing, and servicing of vehicle battery, starting, charging systems, generators, and the diagnosis, service, adjustments and repair of various automotive ignition systems and vehicle accessories. Typical computerized engine control systems are inspected and tested. This certificate prepares students for career paths with automotive repair shops and dealerships.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Automotive Electricity	2
ASE 1023	Starting and Charging Systems	2

Subtotal: 6

Second Semester

ASE 2191	Automotive & Diesel Body Electrical	3
ASE 2192	Automotive Computers & Ignition Systems	3

Subtotal: 6

Total Credit Hours: 12

AUTOMATIC TRANSMISSION TRANSAXLE CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Automatic Transmission Transaxle and enter the workforce. Students explore automatic and manual transmission, and transaxle diagnosis and repair procedures. This certificate program studies the operating principles and repair procedures relating to axle-shaft and universal joints, automotive differentials, and four-wheel and all-wheel drive units. Students will perform minor adjustments on an automatic transmission and transaxle. They will learn 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. This certificate prepares students for career paths with automotive repair shops and dealerships.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 2050	Automatic Transmission/Transaxle Service	1

Subtotal: 3

Second Semester

ASE 1050	Manual Drive Train & Axle Maintenance	2
ASE 1051	Man Trans/Transaxles/Clutches I	2
ASE 1092	Manual Transmission, Transaxles, Clutches II	3
ASE 2051	Automotive Transmission & Transaxle Repair	3

Subtotal: 10

Total Credit Hours: 13

BRAKES CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Brakes and enter the workforce. Students explore all phases of automobile brake diagnosis and repair procedures. This certificate program covers the basic operation of automotive braking systems, including the operation, diagnosis, and basic repair of disc brakes, drum brakes, and basic hydraulic systems. Students will be prepared to work on modern automotive braking systems, including operation, diagnosis, service, and repair of the anti-lock braking systems, power assist units and machine operations. This certificate prepares students for career paths with automotive repair shops and dealerships.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Automotive Electricity	2
ASE 1010	Automotive Brake Service I	2
ASE 1011	Automotive Brake Service II	2
ASE 2010	Automotive Power & ABS Brake Systems	2

Subtotal: 10

Total Credit Hours: 10

GENERAL AUTOMOTIVE MAINTENANCE & REPAIR CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in General Automotive Maintenance & Repair and enter the workforce. Students explore automotive engine diagnosis along with several automotive systems. This program provides students with safety instruction in the shop and on the automobile, and an overview of automotive brakes, electrical, suspension and steering, and engine systems. Students learn to diagnose and repair common problems and receive the theoretical background and practical experience to attain entry-level careers with automotive repair shops and dealerships.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Automotive Electricity	2
ASE 1023	Starting and Charging Systems	2
ASE 1030	General Engine Diagnosis	2
ASE 1040	Suspension and Steering I	2
ASE 1010	Automotive Brake Service I	2
ASE 1011	Automotive Brake Service II	2
ASE 2050	Automatic Transmission/Transaxle Service	1
	Subtotal:	**15**

Total Credit Hours: 15

MANUAL DRIVETRAIN & AXLES CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Manual Drivetrain & Axles and enter the workforce. Students explore an overview of automotive drivetrain and axle system repair procedures. This program introduces students to U-joint and axle shaft service, manual transmissions/transaxles and clutches, differentials, and four-wheel- and all-wheel-drive service. This certificate prepares students for career paths with automotive repair shops and dealerships.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Automotive Electricity	2
ASE 1050	Manual Drive Train & Axle Maintenance	2
ASE 1051	Man Trans/Transaxles/Clutches I	2
ASE 1092	Manual Transmission, Transaxles, Clutches II	3
	Subtotal:	**11**

Total Credit Hours: 11

SUSPENSION & STEERING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-semester Certificate in Suspension & Steering and enter the workforce. Students explore an overview of automotive suspension and steering repair procedures. This program prepares students to diagnose and service suspensions and steering systems and their components, including electronic suspensions and steering systems. This certificate prepares students for career paths with automotive repair shops and dealerships.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Automotive Electricity	2
ASE 1040	Suspension and Steering I	2
ASE 1041	Suspension and Steering II	2
ASE 2194	Suspension & Steering III	3
	Subtotal:	**11**

Total Credit Hours: 11

AUTOMOTIVE HEATING & AIR CONDITIONING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Automotive Heating & Air Conditioning and enter the workforce. Students explore automotive heating and air conditioning troubleshooting procedures. This certificate program prepares students to diagnose and service vehicle heating and air conditioning systems and their components. This certificate prepares students for career paths with automotive repair shops and dealerships.

First Semester

ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Automotive Electricity	2
	Subtotal:	**4**

Second Semester

ASE 2095	Heating & Air Conditioning Systems	3
	Subtotal:	**3**

Total Credit Hours: 7

Construction Trades Certificates

CONSTRUCTION FUNDAMENTALS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is only offered at participating high school locations and designed for students wanting to complete a one-semester certificate in Construction Fundamentals and enter the workforce. Students explore math and science applications for construction, job site tours, classroom theory and OSHA standards. Construction Trades certificates prepare entry-level employees to enter into an apprenticeship or employer training program.

Program Description Note: Offered only with FRCC partnering high school programs.

First Semester

CON 1010	Introduction to Construction, Part 1	4
OSH 1310	10-HR Construction Industry Standards	1
CON 1011	Introduction to Construction, Part 2	4
CAPSTONE	Internship (CON 2080) or Capstone (CON 2089)	2

Subtotal: 11

Total Credit Hours: 11
Important Program Notes:

Offered only with FRCC partnering high school programs.

CONSTRUCTION ESSENTIALS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is only offered at participating high school locations and designed for students wanting to complete a one-semester certificate in Construction Essentials and enter the workforce. Students explore construction job site tours, hands-on experience, classroom theory, and OSHA standards. Construction Trades certificates prepare entry-level employees to enter into an apprenticeship or employer training program.

Program Description Note: Offered only with FRCC partnering high school programs.

First Semester

CON 1010	Introduction to Construction, Part 1	4
OSH 1310	10-HR Construction Industry Standards	1

Subtotal: 5

Total Credit Hours: 5
Important Program Notes:

Offered only with FRCC partnering high school programs.

Electronics Engineering Technology

ELECTRONICS ENGINEERING TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Electronics Engineering Technology and enter the workforce. Students explore electronics fundamental theories, applications and troubleshooting. Students interact with electronic devices and systems through a combination of hands-on lab activities and computer simulation preparing them for careers in a wide range of electronics positions. The labs allow students to become highly proficient in the use of standard electronic test equipment, such as oscilloscopes, digital multimeters and power supplies. Courses include instruction in the fundamentals of DC and AC electricity, robotics, PLCs and automated controls, digital logic and microprocessors, and RF power systems.

First Semester

MTE 1102	Safety Manufacturing Environment	1
MTE 1100	Print Reading for Manufacturing	3
ELT 1004	Electronic Assembly	3
MATH	MAT 1150/1340/1400/1420/1440/2410 or Higher	3
ELT 1206	Fundamentals of DC/AC	4

Subtotal: 14

Semester Note: ELT 1206 **is offered in Fall semesters.**

If the student cannot take all of the First Semester courses, they **should take the recommended math course**, otherwise they will not be able to complete the program in 2 years.

Upon completion of MTE 1102, MTE 1100, MAT 1150 or higher, and ELT 1206, you **should apply for the Electronics Assembly Certificate** (p. 85)**.**

Second Semester

ELT 1212	Advanced DC-AC	3
ELT 2254	Industrial Wiring	3
ELT 2252	Motors and Controls	3
ELT 1247	Digital Devices I	4
ELT 2215	Operational Amplifiers	3

Subtotal: 16

Semester Note: Upon completion of MTE 1102, MTE 1100, MAT 1150 or higher (p. 235), ELT 1206 (semester 1), and ELT 1212,

ELT 2254, ELT 2252, ELT 1247, and ELT 2215, you **should apply for your Basic Electronics Certificate** (p. 84)**.**

Third Semester

ELT 2437	Vacuum & Power RF Systems	3
ELT 2358	Programmable Logic Controllers	3
ELT 2361 or ELT 2362	Microprocessors (2361) or Intro to Microcontrollers (2362)	3
EIC 1265	Solid State Devices & Circuits	4
CAPSTONE	Internship (MTE/ELT 2080) or Capstone (MTE 2089)	1
		Subtotal: 14

Fourth Semester

PHYSICS	Conceptual Physics w/Lab (PHY 1105) or Higher	4
ENGLISH	ENG 1015/1031/1021/1022	3
GEN EDU	COM 1150/1250 or MTE 1110	3
ELT 2368	Robotics Technologies	3
ELT 2367	Introduction to Robotics	1
CIS 1018	Introduction to PC Applications	3
		Subtotal: 17

Upon completion of ELT 2437, ELT 2358, ELT 2361 or MTE 2080 (semester 3), and ELT 2368 and ELT 2367, you should apply for the **Electronic Systems & Automation Certificate** (p. 84)**.**

Total Credit Hours: 61
Important Program Notes:

Electronic Engineering Technology cohort **begins in the Fall semester.**

If you take Technical Mathematics (MAT 1150) or more credits in mathematics than are listed, it **will increase the total credits for the degree.**

You **must complete a minimum of 61 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

BASIC ELECTRONICS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Basic Electronics and enter the workforce. During the first semester students learn basic electrical theory, soldering and assembly skills, and manufacturing print reading skills, earning a one-semester Certificate in Electronic Assembly. The second semester adds further instruction in electrical DC/AC theory, industrial wiring, motors and control, digital systems, and operational amplifiers. This program prepares students for entry-level careers in electronics manufacturing that require DC/AC electrical theory, print reading, and electrical assembly and wiring skills.

First Semester

MTE 1102	Safety Manufacturing Environment	1
MTE 1100	Print Reading for Manufacturing	3
ELT 1004	Electronic Assembly	3
MATH	MAT 1150/1340/1400/1420/1440/2410 or Higher	3
ELT 1206	Fundamentals of DC/AC	4
		Subtotal: 14

Semester Note: ELT 1206 **is offered in fall semesters.**

If the student cannot take all of the First Semester courses, they s**hould take the recommended math course**, otherwise they will not be able to complete the program in 2 years.

Upon completion of MTE 1102, MTE 1100, ELT 1065, MAT 1150 or higher (p. 235), and ELT 1206, you **should apply for the Electronics Assembly Certificate** (p. 85)**.**

Second Semester

ELT 1212	Advanced DC-AC	3
ELT 2254	Industrial Wiring	3
ELT 2252	Motors and Controls	3
ELT 1247	Digital Devices I	4
ELT 2215	Operational Amplifiers	3
		Subtotal: 16

Total Credit Hours: 30
Important Program Notes:

Basic Electronics Certificate cohort **begins in the fall semester.**

ELECTRONIC SYSTEMS & AUTOMATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students who have completed the Basic Electronics Certificate and who wish to earn a stackable Certificate in Electronics Systems and Automation. During the first semester students study Programmable Logic Controllers, microprocessors, solid state electronic devices, and radio frequency (RF) systems. During the second semester students concentrate on industrial robotics and automated manufacturing systems. This program prepares students for entry-level careers in industrial automation and robotics.

First Semester

EIC 1265	Solid State Devices & Circuits	4
ELT 2437	Vacuum & Power RF Systems	3
ELT 2358	Programmable Logic Controllers	3
ELT 2361 or ELT 2362	Microprocessors (2361) or Intro to Microcontrollers (2362)	3
MTE 2080	Manufacturing Internship	1
		Subtotal: 14

Second Semester

ELT 2368	Robotics Technologies	3
ELT 2367	Introduction to Robotics	1
		Subtotal: 4

Total Credit Hours: 18
Important Program Notes:

Electronic Systems and Automation Certificate cohort **begins in the fall semester.**

ELECTRONICS ASSEMBLY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one semester Certificate in Electronics Assembly and enter the workforce. Students explore multiple phases of the electronics manufacturing industry. Students learn and practice soldering skills, electronic assembly skills, and the ability to read industrial prints. Students also study the basic math skills required to work in the electronics field. This program prepares students for entry-level careers in electronics manufacturing that require print reading skills, safety, electronic assembly, and fundamentals of DC/AC.

First Semester

MTE 1102	Safety Manufacturing Environment	1
MTE 1100	Print Reading for Manufacturing	3
ELT 1206	Fundamentals of DC/AC	4
ELT 1004	Electronic Assembly	3
MATH	MAT 1150/1340/1400/1420/1440/2410 or Higher	3

Subtotal: 14

Semester Note: ELT 1206 **is offered in fall semesters.**

Total Credit Hours: 14
Important Program Notes:

If you take MAT 1150 or mathematics courses with more credits than are listed, it **will increase the total credits for the certificate.** You **must complete 14 credits** to earn your Electronic Assembly Certificate. You **should not exceed 15 credits.** You **may want to check with your advisor** to monitor your completion progress and select your electives.

Electronic Assembly Certificate cohort **begins in the Fall semester.**

Heating, Ventilation, Air Conditioning, Refrigeration

HEATING, VENTILATION, AIR CONDITIONING & REFRIGERATION ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Heating, Ventilation, Air Conditioning & Refrigeration and enter the workforce. Students explore all aspects of heating, ventilation, air conditioning, and refrigeration systems and troubleshooting. This AAS degree provides basic to advanced training in heating, ventilation, air conditioning, and refrigeration. Other topics include: basic electricity and electrical components for HVACR, refrigerant tubing, fabrication, soldering, brazing, trouble shooting, residential and commercial heating, hot water heating, industrial controls, advanced troubleshooting, customer service, teamwork, and communication. Career path options include various small and large HVACR business repair opportunities. Students must complete Industry Competency Exams (ICE): Residential Air Conditioning and Heating, Light Commercial Air Conditioning and Heating, and Commercial Refrigeration. FRCC's HVAC/R Program is nationally accredited by PAHRA, the Partnership for Air Conditioning, Heating, Refrigeration Accreditation, the only accreditation supported by major industry associations.

First Semester

HVA 1001	Intro to Air Conditioning & Refrigeration	4
HVA 1003	Basic Electricity	3
HVA 1002	Basic Refrigeration	4
HVA 1004	Electrical Components	4

Subtotal: 15

Semester Note: Upon completion of HVA 1001, HVA 1002, HVA 1003, and HVA 1004, you **should apply for the HVAC/R Fundamentals Certificate** (p. 87)**.**

Second Semester

HVA 2000	International Residential Code	2
HVA 2047	Hot Water Heating Systems	4
HVA 2001	Heating for Commercial	3
HVA 2003	Industrial Controls	3
GEN EDU	COM 1150/1250 or MTE 1110	3

Subtotal: 15

Third Semester

HVA 1022	Commercial Refrigeration	4
HVA 1023	Air Conditioning	4
HVA 1024	Advanced Air Conditioning	4
HVA 2002	Troubleshooting & Customer Service	3

Subtotal: 15

Semester Note: Upon completion of HVA 1001, HVA 1002, HVA 1003, HVA 1004, HVA 2000, HVA 2002, HVA 1023, HVA 1024, HVA 2047, 3 general education credits (**select one** course from COM 1150, COM 1250, or MTE 1110), and the corresponding Industry Competency Exam (ICE) (Contact the HVAC/R department for current pricing and to schedule the ICE Exam), you **should apply for the Residential Air Conditioning & Heating Certificate** (p. 86)**.**

Upon completion of HVA 1001, HVA 1002, HVA 1003, HVA 1004, HVA 2000, HVA 2001, HVA 2002, HVA 2003, HVA 1023, HVA 1024, and 3 general education credits (select one **course from COM 1150, COM 1250, or MTE 1110), and the corresponding Industry Competency Exam (ICE) (Contact the HVAC/R department for current pricing and to schedule the ICE Exam), you** should apply for the Light Commercial Air Conditioning & Heating Certificate (p. 86).

Upon completion of HVA 1001, HVA 1002, HVA 1003, HVA 1004, HVA 2002, HVA 2003, HVA 1022, 3 general education credits (select one course from COM 1150, COM 1250, or MTE 1110), and the corresponding Industry Competency Exam (ICE) (Contact the HVAC/R department for current pricing and to schedule the ICE Exam), you **should apply for the Commercial Refrigeration Certificate** (p. 87)**.**

Fourth Semester

HVA 2080 or HVA 2089	Internship (HVA 2080) or Capstone (HVA 2089)	2
PHYSICS	Conceptual Physics w/Lab (PHY 1105) or Higher	4
MATH	Career Mathematics (MAT 1140) or Higher	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
GEN EDU	Any Approved Elective List Course	3
		Subtotal: 15

Total Credit Hours: 60
Important Program Notes:

You **must complete the Industry Competency Exams (ICE) Residential Air Conditioning and Heating, Light Commercial Air Conditioning and Heating, and Commercial Refrigeration** as a requirement for this AAS degree. **Contact the Larimer Campus Testing Center** for current pricing and to schedule the ICE Exam.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

HVAC/R Certificates

RESIDENTIAL AIR CONDITIONING & HEATING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a three semester Certificate in Residential Air Conditioning & Heating and enter the workforce. Students explore all phases of residential air conditioning and heating systems and troubleshooting. This certificate provides training in the design, diagnosis, service and repair of residential HVAC systems and hot-water heating systems. In addition, it provides training in the application of the International Residential Code with attention to the sizing requirements of parts V and VI of the code. Career path options include various small and large HVACR business repair opportunities.

First Semester

HVA 1001	Intro to Air Conditioning & Refrigeration	4
HVA 1002	Basic Refrigeration	4
HVA 1003	Basic Electricity	3
HVA 1004	Electrical Components	4
		Subtotal: 15

Semester Note: Upon completion of HVA 1001, HVA 1002, HVA 1003, and HVA 1004, you should apply for the **HVAC/R Fundamentals Certificate** (p. 87).

Second Semester

HVA 2000	International Residential Code	2
HVA 2002	Troubleshooting & Customer Service	3
HVA 1023	Air Conditioning	4
HVA 1024	Advanced Air Conditioning	4
		Subtotal: 13

Third Semester

HVA 2047	Hot Water Heating Systems	4
GEN EDU	COM 1150/1250 or MTE 1110	3
		Subtotal: 7

Total Credit Hours: 35
Important Program Notes:

Students **must complete the corresponding Industry Competency Exam (ICE)** for the Residential Air Conditioning and Heating certificate. **Contact the Larimer Campus Testing Center** for current pricing and to schedule the ICE Exam.

LIGHT COMMERCIAL AIR CONDITIONING & HEATING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a three semester Certificate in Light Commercial Air Conditioning & Heating and enter the workforce. Students explore all phases of light commercial air conditioning and heating systems and troubleshooting. This certificate provides training in the design, diagnosis, service and repair of residential and light commercial HVAC systems including commercial building controls. In addition, it provides training on the application of the International Residential Code with attention to the sizing requirements of parts V and VI of the code. Career path options include various small and large HVACR business repair opportunities.

First Semester

HVA 1001	Intro to Air Conditioning & Refrigeration	4
HVA 1002	Basic Refrigeration	4
HVA 1003	Basic Electricity	3
HVA 1004	Electrical Components	4
		Subtotal: 15

Semester Note: Upon completion of HVA 1001, HVA 1002, HVA 1003, and HVA 1004, you **should apply for the HVAC/R Fundamentals Certificate** (p. 87)**.**

Second Semester

HVA 2000	International Residential Code	2

HVA 2001	Heating for Commercial	3
HVA 2002	Troubleshooting & Customer Service	3
HVA 2003	Industrial Controls	3
GEN EDU	COM 1150/1250 or MTE 1110	3
		Subtotal: 14

Third Semester

HVA 1023	Air Conditioning	4
HVA 1024	Advanced Air Conditioning	4
		Subtotal: 8

Total Credit Hours: 37
Important Program Notes:

Students **must complete the corresponding Industry Competency Exam (ICE)** for the Light Commercial Air Conditioning and Heating certificate. **Contact the Larimer Campus Testing Center** for current pricing and to schedule the ICE Exam.

COMMERCIAL REFRIGERATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Commercial Refrigeration and enter the workforce. Students explore all phases of commercial refrigeration, electrical components, controls, troubleshooting and repair. This certificate provides training in the diagnosis, service and repair of commercial icemakers, walk-in coolers and freezers, and self-contained refrigeration units. Career path options include various small and large HVACR business repair opportunities.

First Semester

HVA 1001	Intro to Air Conditioning & Refrigeration	4
HVA 1002	Basic Refrigeration	4
HVA 1003	Basic Electricity	3
HVA 1004	Electrical Components	4
		Subtotal: 15

Semester Note: Upon completion of HVA 1001, HVA 1002, HVA 1003, and HVA 1004, you **should apply for the HVAC/R Fundamentals Certificate** (p. 87)**.**

Second Semester

HVA 1022	Commercial Refrigeration	4
HVA 2002	Troubleshooting & Customer Service	3
HVA 2003	Industrial Controls	3
GEN EDU	COM 1150/1250 or MTE 1110	3
		Subtotal: 13

Total Credit Hours: 28
Important Program Notes:

Students **must complete the corresponding Industry Competency Exam (ICE)** for the Commercial Refrigeration certificate. **Contact the Larimer Campus Testing Center** for current pricing and to schedule the ICE Exam.

HVAC/R FUNDAMENTALS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one semester Certificate in HVAC/R Fundamentals and enter the workforce. Students explore the skills necessary to address all aspects of air conditioning, refrigeration, electrical theory, and electrical components. This certificate teaches basic skills in HVAC/R including brazing/soldering, copper tubing fabrication, EPA certification and basic electrical skills. To become industry certified by passing the Industry Competency Exam (ICE), students are advised to pursue one of the additional HVAC/R certificates or the AAS degree. Career path options include various small and large HVACR business repair opportunities.

First Semester

HVA 1001	Intro to Air Conditioning & Refrigeration	4
HVA 1002	Basic Refrigeration	4
HVA 1003	Basic Electricity	3
HVA 1004	Electrical Components	4
		Subtotal: 15

Total Credit Hours: 15

Optics Technology

OPTICS TECHNOLOGY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Optics Technology and enter the workforce. Students explore the production processes of precision optics used in cameras, projectors, eye wear, microscopes, telescopes, appliances and binoculars. This certificate prepares students for entry-level technician positions in the optics manufacturing industry that includes metrology equipment and advanced CNC fabrication, optics fabrication and assembly. Students will learn about optical engineering drawings/prints, lean manufacturing, statistical process control, and geometric dimensioning and tolerancing for optics, focusing on the unique practices and toolsets within each. Students will prepare for working in laboratory and cleanroom environments. They will also acquire an understanding of thin film optical coatings and fiber optics.

First Semester

OTE 1001	Quality Assurance of Precision Optics	3

OTE 1003	Laboratory Operations	3
OTE 1005	Fabrication Methods for Precision Optics	4
MAT 1150 or MAT 1340 or MAT 1420+	Technical Mathematics (MAT 1150) or College Algebra (MAT 1340) or College Trigonometry (MAT 1420) or Pre-calculus (MAT 1440) or Calculus I (MAT 2410) or higher	3
		Subtotal: 13

Second Semester

OTE 1002 or MTE 2220	Optics: Intro to Manufacturing Tech (OTE 1002) or Lean Six Sigma (MTE 2220)	3
OTE 1030	Metrology of Optical Systems	3
OTE 2005	Adv Fabrication Precision Optics	4
CIS 1018	Introduction to PC Applications	3
		Subtotal: 13

Semester Note: MTE 2220 is a **Fall semester** option, OTE 1002 is a **Spring semester** option.

Total Credit Hours: 26

Precision Machining Technology

PRECISION MACHINING TECHNOLOGY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting all semesters of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a three-semester certificate in Precision Machining Technology and enter the workforce. This certificate is earned with successful completion of both the Manual Machining and CNC Machining certificates. Students explore CNC lathe turning and milling operations. This certificate program builds on the Manual Machining certificate and introduces students to computer numerical control (CNC) turning and milling operations, exposure to Computer-Aided Design/Computer-Aided Machining (CAD/CAM) for 2-axis machining, lathe programming, and CNC systems. Students also learn proficiencies in metrology. This program prepares students for entry-level careers in machining and manufacturing.

First Semester

MAC 1000	Machine Shop Safety	1
MAC 1001	Introduction to Machine Shop	3
MAC 1002	Print Reading for Machinists	3
MAC 1010	Introduction to Engine Lathe	3
MAC 1020	Introduction to Milling Machine	3
MAT 1150 or MAT 1420 or MAT 1440 or MAT 2410+	Technical Mathematics (MAT 1150) or College Trigonometry (MAT 1420) or Pre-Calculus (MAT 1440) or Calculus I or higher (MAT 2410 or higher)	3
		Subtotal: 16

Second Semester

MAC 2001	Intro to CNC Turning Operations	3
MAC 2005	Intro to CNC Milling Operations	3
MAC 2002	CNC Turning Operations II	3
MAC 2006	CNC Milling Operations II	3
MAC 2043 or MAC 2040	Mastercam (MAC 2043) or CAD/CAM 2D (MAC 2040)	3
		Subtotal: 15

Third Semester

MTE 1130	Metrology	3
		Subtotal: 3

Total Credit Hours: 34
Important Program Notes:

Students in the Precision Machining Technology program enter as a cohort. All students **must be full-time and register for all the program classes each semester**. The classes in the first and second semesters are organized in 7.5-week blocks. The classes are scheduled sequentially with the competencies learned in each class building on the students' skills and preparing them for the next group of classes. **Manual Machining must be completed before taking CNC Machining.**

CNC MACHINING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting all semesters of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in CNC Machining and enter the workforce. Students explore the skills and techniques in CNC lathe and mill programs, CAD/CAM, and metrology principles. This program trains students in computer numerical control (CNC) lathe operations and CNC milling operations. Students gain exposure to Computer-Aided Design/Computer-Aided Machining (CAD/CAM) for 2-axis machining, 3-axis wireframe and surface modeling, lathe programming, and direct numerical control (DNC) systems. This certificate program prepares students for entry-level careers in CNC machining and manufacturing.

First Semester

MAC 2001	Intro to CNC Turning Operations	3
MAC 2005	Intro to CNC Milling Operations	3
MAC 2002	CNC Turning Operations II	3
MAC 2006	CNC Milling Operations II	3
MAC 2043 or MAC 2040	Mastercam (MAC 2043) or CAD/CAM 2D (MAC 2040)	3
		Subtotal: 15

Second Semester

MTE 1130	Metrology	3
		Subtotal: 3

Total Credit Hours: 18
Important Program Notes:

Students in the Precision Machining Technology program enter as a cohort. All students **must be full-time and register for all the program classes each semester**. The classes in the first and second semesters are organized in 7.5-week blocks. The classes are scheduled sequentially with the competencies learned in each class building on the students' skills and preparing them for

the next group of classes. **Manual Machining must be completed before taking CNC Machining**.

MANUAL MACHINING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting all semesters of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Manual Machining and enter the workforce. Students explore industrial print reading, lathe applications, and milling machine operation. This certificate program offers training in safety procedures, bench tools, layout tools, power equipment, precision measurement, and hand tools. Students will learn to read blueprints and interpret symbols, notes, dimensions and tolerances. They are introduced to basic lathe and milling applications. This certificate prepares students for entry-level career positions in machining and manufacturing.

First Semester

MAC 1000	Machine Shop Safety	1
MAC 1001	Introduction to Machine Shop	3
MAC 1002	Print Reading for Machinists	3
MAC 1010	Introduction to Engine Lathe	3
MAC 1020	Introduction to Milling Machine	3
MAT 1150 or MAT 1420 or MAT 1440 or MAT 2410+	Technical Mathematics (MAT 1150) or College Trigonometry (MAT 1420) or Pre-Calculus (MAT 1440) or Calculus I or higher (MAT 2410 or higher)	3

Subtotal: 16

Total Credit Hours: 16

Important Program Notes:

Students in the Precision Machining Technology program enter as a cohort. All students **must be full-time and register for all the program classes each semester.** The classes in the first and second semesters are organized in 7.5-week blocks. The classes are scheduled sequentially with the competencies learned in each class building on the students' skills and preparing them for the next group of classes. **Manual Machining must be completed before taking CNC Machining.**

Welding Technology

WELDING TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Welding Technology and enter the workforce. Students explore metal cutting processes, blueprint reading, and many welding techniques. These welding techniques include shielded metal arc, gas tungsten arc, and gas metal arc. Graduates from this program exit with quality welding skills and the teamwork and communication skills to match. This degree prepares students for entry-level careers in welding, fabrication, and manufacturing. An AAS degree in Welding shows employers you are job-ready with quality welding skills, knowledge of job safety, teamwork, and communication skills.

First Semester

WEL 1000	Safety for Welders	1
WEL 1001	Allied Cutting Processes	4
WEL 1003	Basic Shielded Metal Arc I	4
WEL 1004	Basic Shielded Metal Arc II	4
MATH	Career Mathematics (MAT 1140) or Higher	3

Subtotal: 16

Semester Note: Upon completion of WEL 1000 and WEL 1001, you **should apply for the Oxyacetylene Welding Certificate** (p. 91)**.**

Upon completion of WEL 1000 and 8 credits of electives (select two courses from WEL 1001, WEL 1003, WEL 1004, WEL 1024, or WEL 2001), you **should apply for the Welding Fundamentals Certificate** (p. 92)**.**

Second Semester

WEL 2001	Gas Metal Arc Welding I	4
WEL 1024	Gas Tungsten Arc Welding I	4
WEL 2003	Flux Cored Arc Welding I	4
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3

Subtotal: 15

Semester Note: Upon completion of WEL 1000, WEL 2001, and WEL 2003, you **should apply for the Gas Metal Arc (MIG) Welding Certificate** (p. 91)**.**

Third Semester

WEL 1006	Blueprint Reading for Welders & Fitters	4
WEL 2024	Gas Tungsten Arc Welding II	4
WEL 1010	Advanced Shielded Metal Arc I	4
PHYSICS	Conceptual Physics w/Lab (PHY 1105) or Higher	4

Subtotal: 16

Semester Note: Upon completion of WEL 1000, WEL 1024, and WEL 2024, you **should apply for the Gas Tungsten ARC (TIG) Welding Certificate** (p. 91)**.**

Upon completion of WEL 1000, WEL 1003, WEL 1004, and WEL 1010, you **should apply for the Shielded Metal Arc Welding Certificate** (p. 91)**.**

Fourth Semester

GEN EDU	Any Approved Elective List Course	3
WELDING	WEL 1045/1050/2030/2031/2050/2051/2064	3
GEN EDU	COM 1150/1250 or MTE 1110	3
WELDING	WEL 2030/2031/2050/2051/2064	4

Subtotal: 13

Semester Note: Upon completion of WEL 1000, WEL 1001, WEL 1003, WEL 1010, WEL 2001, WEL 1024, WEL 1004, WEL 2003, and WEL 2024, you **should apply for the Comprehensive Welding Certificate** (p. 90)**.**

Upon completion of WEL 1000, WEL 1001, WEL 1003, WEL 2001, WEL 1024, WEL 1004, WEL 2003, WEL 2024, WEL 1010, WEL 2030, and WEL 2031, you **should apply for the Pipe Welding Certificate.**

Upon completion of WEL 1000, WEL 1001, WEL 1003, WEL 2001, WEL 1024, WEL 1004, WEL 1006, WEL 2050, and WEL 2051, you **should apply for the Metal Fabrication Certificate** (p. 90)**.**

Total Credit Hours: 60
Important Program Notes:

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Welding Certificates

COMPREHENSIVE WELDING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Comprehensive Welding and enter the workforce. Students explore shop safety, metal cutting, and a variety of industry welding processes. This program covers a broad spectrum of welding techniques including cutting processes, shielded metal arc welding, gas tungsten arc welding, and gas metal arc welding. This certificate program prepares students for entry-level career positions in welding, fabrication and manufacturing.

First Semester

WEL 1000	Safety for Welders	1
WEL 1001	Allied Cutting Processes	4
WEL 1003	Basic Shielded Metal Arc I	4
WEL 1004	Basic Shielded Metal Arc II	4
WEL 2001	Gas Metal Arc Welding I	4
	Subtotal:	**17**

Semester Note: You **may choose to take the Code Welding electives**. MTE 1100 and WEL 1006 are not required for students choosing the Code Welding path.

Second Semester

WEL 1010	Advanced Shielded Metal Arc I	4
WEL 1024	Gas Tungsten Arc Welding I	4
WEL 2003	Flux Cored Arc Welding I	4
WEL 2024	Gas Tungsten Arc Welding II	4
	Subtotal:	**16**

Total Credit Hours: 33

METAL FABRICATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-and-a-half year (three-semester) certificate in Metal Fabrication and enter the workforce. Students explore design, layout, and fabrication concepts in conjunction with several welding processes. This program covers a broad spectrum of welding techniques including: cutting processes, shielded metal arc welding, gas tungsten arc welding, gas metal arc welding, blueprint reading, design, layout, and metal fabrication. This program prepares students for entry-level career positions in metal fabrication, welding, and manufacturing.

First Semester

WEL 1000	Safety for Welders	1
WEL 1001	Allied Cutting Processes	4
WEL 1003	Basic Shielded Metal Arc I	4
WEL 1004	Basic Shielded Metal Arc II	4
	Subtotal:	**13**

Second Semester

WEL 1024	Gas Tungsten Arc Welding I	4
WEL 2001	Gas Metal Arc Welding I	4
WEL 2003	Flux Cored Arc Welding I	4
	Subtotal:	**12**

Third Semester

WEL 1006	Blueprint Reading for Welders & Fitters	4
WEL 2050	Layout and Fabrication	4
WEL 2051	Design, Layout & Fabrication	4
	Subtotal:	**12**

Total Credit Hours: 37

CREATIVE METALWORKING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Creative Metalworking and enter the workforce. Students explore the design and construction of welded sculptures by using a variety of welding and fabrication processes. This certificate program is for the artistic student. It combines 2-D design and introductory welding concepts to produce welded sculptures using techniques to color and texture metal. This program prepares students for entry-level career positions in welding studio, fabrication and manufacturing.

First Semester

WEL 1000	Safety for Welders	1

WEL 1001	Allied Cutting Processes	4
DESIGN	Visual Concepts 2-D Design (ART 1002) or SolidWorks/Mechanical (CAD 2455)	3
		Subtotal: 8

Second Semester

WELDING	Intro-Gas Tungsten Arc Welding (WEL 1024) or Gas Metal Arc Welding I (WEL 2001)	4
WEL 2064	Creative Welding	4
		Subtotal: 8

Total Credit Hours: 16

SHIELDED METAL ARC WELDING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Shielded Metal Arc Welding and enter the workforce. Students explore shielded metal arc welding techniques and processes. This certificate program covers safety inspections, minor repairs, operating parameters, and operating shielded metal arc welding equipment using various electrodes. This program prepares students for entry-level career positions in welding, fabrication, and manufacturing.

First Semester

WEL 1000	Safety for Welders	1
WEL 1003	Basic Shielded Metal Arc I	4
WEL 1004	Basic Shielded Metal Arc II	4
		Subtotal: 9

Second Semester

WEL 1010	Advanced Shielded Metal Arc I	4
		Subtotal: 4

Total Credit Hours: 13

GAS METAL ARC (MIG) WELDING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Gas Metal Arc (MIG) Welding and enter the workforce. Students explore welding safety practices and a range of gas metal arc welding techniques. This certificate program covers welding in all positions and on various joint configurations using gas metal arc welding processes on various metals. This program prepares students for entry-level career positions in welding, fabrication and manufacturing.

First Semester

WEL 1000	Safety for Welders	1
WEL 2001	Gas Metal Arc Welding I	4
WEL 2003	Flux Cored Arc Welding I	4
		Subtotal: 9

Total Credit Hours: 9

GAS TUNGSTEN ARC (TIG) WELDING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Gas Tungsten Arc (TIG) Welding and enter the workforce. Students explore welding safety practices and a range of gas tungsten arc welding techniques. This certificate program covers welding in all positions on various joint configurations using gas tungsten arc welding processes on various metals. This program prepares students for entry-level career positions in welding, fabrication and manufacturing.

First Semester

WEL 1000	Safety for Welders	1
WEL 1024	Gas Tungsten Arc Welding I	4
WEL 2024	Gas Tungsten Arc Welding II	4
		Subtotal: 9

Total Credit Hours: 9

OXYACETYLENE WELDING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Oxyacetylene Welding and enter the workforce. Students explore federal and state safety regulations along with metal cutting methods. This certificate program covers setting up equipment and performing cutting and gouging operations using various cutting processes. This program prepares students for entry-level career positions in welding, fabrication, and manufacturing.

First Semester

WEL 1000	Safety for Welders	1
WEL 1001	Allied Cutting Processes	4
		Subtotal: 5

Total Credit Hours: 5

WELDING FUNDAMENTALS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Welding Fundamentals and enter the workforce. Students explore safety practices and several methods of welding. This program provides an introduction to welding skills including: cutting, shielded metal arc welding, gas tungsten arc welding, and gas metal arc welding. This program prepares students for entry-level career positions in welding, fabrication, and manufacturing.

First Semester

WEL 1000	Safety for Welders	1
WELDING	WEL 1003/1004/1024/2001	4
WELDING	WEL 1003/1004/1024/2001	4
		Subtotal: 9

Total Credit Hours: 9

Math and Science

This Career and Academic Community includes the following programs: Biology, Chemistry, Fermentation Sciences, Forestry, Wildlife & Natural Resources, Geospatial Science, Geography, Geology, Horticulture & Landscape Technologies, Math, and Physics. To learn more about the program click on the program below.

ASSOCIATE OF ENGINEERING SCIENCE IN GENERAL ENGINEERING

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

There are **multiple ways** to pursue a **degree in engineering**. It is very **important** to **work** with your **Pathways Advisor** to develop the **best academic plan** for where you are **starting** and where you are hoping to **transfer**.

For students who want to complete a degree in engineering and are **undecided about the engineering field or transfer university,** but are **college chemistry** and **calculus ready,** the **AES in General Engineering** is the **most direct path** to a **Bachelor's degree. The majority of coursework will transfer to most universities,** but it is **important to consult with your pathways advisor when selecting electives in the third and fourth semesters. Not all credits are guaranteed to transfer for Bachelor's degree requirements at all universities or for all engineering fields.** It is recommended that you meet with your **advisor** before selecting a **pathway in engineering**.

Program Description

This program is designed for students transferring to a four-year university to complete their BS degree in Engineering. It allows students to complete most of the coursework of the first two years of the BS degree at the community college. Students explore calculus, physics, and engineering applications. Engineering is the application of science and math to solve problems and protect and improve lives. Engineers figure out how things work and find practical uses for scientific discoveries. Most of the things that make our lives safer, more enjoyable, and more productive are products of engineering. This program introduces students to calculus, physics, and engineering and it includes courses that are designed to transfer to universities in order to continue studies in engineering. Career paths in engineering include chemical, civil, electrical, environmental, geological, geophysical, mechanical, mining, petroleum, and quantum engineering. We offer specific degrees in Civil Engineering (AES) (p. 94) and Mechanical Engineering (AES) (p. 93). The Associate of Engineering Science (AES) in General Engineering prepares students to complete the remaining portion of a Bachelor of Science (BS) in Engineering at a four-year university.

The AES in General Engineering requires you to enter prepared to take Calculus I (MAT 2410) and General College Chemistry I (CHE 1111). Any needed prerequisites to be ready for these courses will not count for this degree. For some students, a general AS degree is a better fit. It allows you to apply college-level courses in College Algebra, Pre-calculus, and Physics. See an advisor to discuss testing out options, review transfer university requirements, and to develop an academic plan that works for you.

First Semester

MAT 2410	Calculus I: GT-MA1	5
CHE 1111	General College Chemistry I w/Lab: GT-SC1	5
EGG 1040	Engineering Projects	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing I (ENG 1031)	3
		Subtotal: 16

Semester Note: If you intend to transfer to Colorado State University, you **should take** English Composition I (ENG 1021) **and** English Composition II (ENG 1022).

If you intend to transfer to Colorado School of Mines, you **should take** Technical Writing I (ENG 1031) **or** English Composition II (ENG 1022).

Second Semester

MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics: Calculus-Based I w/Lab: GT-SC1	5
CSC 1060 or EGG 1060	Computer Science I (CSC 1060) or Intro to Engineering Computing (EGG 1060)	4
		Subtotal: 14

Semester Note: If you intend to transfer to Colorado State University, you **should take** Intro to Engineering Computing EGG 1060.

If you intend to transfer to Colorado School of Mines, it is **recommended you take** Computer Science I CSC 1060 which will

be accepted for some of their programs. EGG 1060 does not transfer to Mines.

If you intend to transfer to University of Colorado, it is **recommended you take** Intro to Engineering Computing (EGG 1060).

Third Semester

MAT 2430 or MAT 2431	Calculus III (2430) or Calculus III w/ Engineering Apps (2431)	4
PHY 2112	Physics: Calculus-Based II w/Lab: GT-SC1	5
ELECTIVE	Associate of Engineering Science Elective*	3
ECO 2002 or ECO 2001 or Any GT-SS	Principles of Microeconomics (ECO 2002), Principles of Macroeconomics (ECO 2001), or Any GT-SS Course	3
	Subtotal: 15	

Semester Note: Either ECO 2001 Macroeconomics (GT-SS1) or ECO 2002 Microeconomics (GT-SS1) **needs to be completed** to transfer to Colorado School of Mines equivalent to EBGN201.

Fourth Semester

MAT 2562	Differential Equations with Linear Algebra	4
GT-AH	Environmental Ethics (PHI 2018) or Any GT-AH	3
ELECTIVE	ENG 1022 or HIS 2015/LIT 2002/SOC 2007/PSC 2025 or Any AES Elective*	3
ELECTIVE	Associate of Engineering Science Elective*	3
ELECTIVE	Associate of Engineering Science Elective*	2
	Subtotal: 15	

Semester Note: PHI 2018 Environmental Ethics (GT-AH3) **needs to be completed** with either Technical Writing I (ENG 1031) **or** English Composition II (ENG 1022) to transfer to Colorado School of Mines equivalent to HASS100.

If you **intend to transfer** to Colorado State University, you **should take** ENG 1022.

If you **intend to transfer** to Colorado School of Mines, you **should complete** either 20th Century World History (HIS 2015), World Literature After 1600 (LIT 2002), Environmental Sociology (SOC 2007), or Comparative Government (PSC 2025).

If you **intend to transfer** to another university other than Colorado School of Mines or Colorado State University, you **should take** an Associate of Engineering Science Engineering Elective.

Total Credit Hours: 60
Important Program Notes:

***Associate of Engineering Science in General Engineering Electives** include: EGG 1000, EGG 1050, EGG 1051, EGG 1060, EGG 1065, EGG 2011, EGG 2012, EGG 2020, EGG 2030, EGG 2041, BIO 1111, BIO 1112, CAD 1101, CAD 1102, CAD 2220, CAD 2332, CAD 2455, CHE 1112, CHE 2111, CHE 2112, CSC 1061, CSC 2023, GEY 1111, MAC 1042, MAT 2520, and PHY 2113. An additional elective that **transfers to Colorado State University is ENG 1022, which must be taken with ENG 1021**. Additional electives that **transfer to Colorado School of Mines are either HIS 2015, LIT 2002, SOC 2007, or PSC 2025**. It is important to **consult with a Pathways Advisor to select the correct electives** based on your preferred engineering field and transfer institution.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

ASSOCIATE OF ENGINEERING SCIENCE IN MECHANICAL ENGINEERING

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

There are **multiple ways** to pursue a **degree in engineering**. It is very **important** to **work** with your **Pathways Advisor** to develop the **best academic plan** for where you are **starting** and where you are hoping to **transfer**.

For students who want to complete a **degree in mechanical engineering to transfer to University of Colorado and Colorado State University** and are **college chemistry** and **calculus ready**, the **AES in Mechanical Engineering** is the **most direct path** to a **Bachelor's degree** in this field. It is recommended that you meet with your **advisor** before selecting a **pathway in engineering**.

Program Description
This program is designed for students transferring to a four-year university to complete their BS degree in Mechanical Engineering. It allows students to complete the first two years of the BS degree at the community college. Students explore calculus, physics, and engineering applications. Mechanical engineering combines engineering physics, mathematics, and materials science principles, preparing them to design, analyze, manufacture, and maintain systems that incorporate motion, energy, and force. Mechanical engineers are creative problem solvers who design, develop, and manufacture the machines and instrumentation that run energy, building, environmental, and transportation systems. This program introduces students to calculus, physics, and engineering applications and it includes courses that are design to transfer to Colorado State University and University of Colorado in order to continue studies in mechanical engineering. This is a designed career pathway in mechanical engineering. The Associate of Engineering Science (AES) degree prepares students to complete the second half of a Bachelor of Science (BS) in mechanical engineering at a four-year university, specifically Colorado State University and University of Colorado.

The AES in Mechanical Engineering requires you to enter prepared to take Calculus I (MAT 2410 (p. 237)) and General College Chemistry I (CHE 1111 (p. 188)). See an advisor to discuss testing out options, review transfer university requirements, and to develop an academic plan that works for you.

First Semester

MAT 2410	Calculus I: GT-MA1	5
CHE 1111	General College Chemistry I w/Lab: GT-SC1	5

EGG 1040	Engineering Projects	3
ENG 1021	English Composition I: GT-CO1	3
		Subtotal: 16

Second Semester

MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics: Calculus-Based I w/Lab: GT-SC1	5
EGG 1060	Intro to Engineering Computing	4
EGG 2011	Engineering Mechanics I - Statics	3
		Subtotal: 17

Semester Note: Students transferring to Colorado State University Fort Collins **must take Intro to Engineering Computing (EGG 1060).**

Students transferring to University of Colorado Boulder, University of Colorado Denver, University of Colorado Colorado Springs, **may take** either Intro to Engineering Computing (EGG 1060) **or** Computer Science I (CSC 1060) to fulfill this requirement. EGG 1060 is **preferred** for students transferring to the University of Colorado Boulder, University of Colorado Denver, and University of Colorado Colorado Springs.

Third Semester

MAT 2430 or MAT 2431	Calculus III (2430) or Calculus III w/ Engineering Apps (2431)	4
PHY 2112	Physics: Calculus-Based II w/Lab: GT-SC1	5
EGG 2012	Engineering Mechanics II - Dynamics	3
GT-SS	Any Social & Behavioral Sciences (GT-SS) Course	3
		Subtotal: 15

Fourth Semester

MAT 2562	Differential Equations with Linear Algebra	4
EGG 1050 and EGG 1051 or EGG 2030	Engineering Data Analysis (1050) and Experimental Design (1051) or Mechanical Solids (2030)	3
CAD 2455	SolidWorks/Mechanical	3
GT-AH	Environmental Ethics (PHI 2018) or Any GT-AH	3
ELECTIVE	English Composition II (ENG 1022) or AES in Mechanical Elective*	3
		Subtotal: 16

Semester Note: Students transferring to Colorado State University Fort Collins **must take EGG 1050 and EGG 1051.** Students transferring to University of Colorado Boulder, University of Colorado Denver, University of Colorado Colorado Springs **must take EGG 2030.**

Students transferring to Colorado State University Fort Collins **must take CAD 2455.** Students transferring to University of Colorado Boulder, University of Colorado Denver, University of Colorado Colorado Springs **must take either** SolidWorks/Mechanical (CAD 2455) **or** Thermodynamics (EGG 2020) to fulfill this engineering requirement.

Students transferring to Colorado State University Fort Collins **must take ENG 1022**. Students transferring to University of Colorado Boulder, University of Colorado Denver, or University of Colorado Colorado Springs **must take an AES in Mechanical Elective**.

Total Credit Hours: 64
Important Program Notes:

***Associate of Engineering Science in Mechanical Engineering Electives** include: ENG 1022, EGG 2020, CSC 1061, PHY 2113, MAC 1042, CAD 2455, or Any GT-HI1 course.

If you are pursuing transfer to University of Colorado Boulder or University of Colorado Colorado Springs, you **may take the final 3 credits of electives from any of the following courses**: Thermodynamics (EGG 2020), Computer Science II (CSC 1061), Physics III: Calculus-Based Modern Physics (PHY 2113), 3D Modeling Fabrication Lab (MAC 1042), and SolidWorks/Mechanical (CAD 2455). For students transferring to University of Colorado Boulder, it is **recommended that you take** CAD 2455 and MAC 1042 together.

If you are pursuing transfer to Colorado State University, you **must take** ENG 1022.

If you are pursuing transfer to University of Colorado, Denver, you **may take** a GT-HI1 course.

You **must complete a minimum of 64 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

ASSOCIATE OF ENGINEERING SCIENCE IN CIVIL ENGINEERING

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

There are **multiple ways** to pursue a **degree in engineering**. It is very **important** to **work** with your **Pathways Advisor** to develop the **best academic plan** for where you are **starting** and where you are hoping to **transfer**.

For students who want to complete a **degree in civil engineering and transfer to the University of Colorado and Colorado State University** and are **college chemistry** and **calculus ready**, the **AES in Civil Engineering** is the **most direct path** to a **Bachelor's degree** in this field. It is recommended that you meet with your **advisor** before selecting a **pathway in engineering**.

Program Description
This program is designed for students transferring to a four-year university to complete their BS degree in Civil Engineering. It allows students to complete the first two years of the BS degree at the community college. Students explore calculus, physics, and engineering applications. Civil engineers design, build, and maintain the foundation for our modern society – our buildings, roads and bridges, drinking water and energy systems, sea ports and airports, and the infrastructure for a cleaner environment, to name just a few. Civil engineering is an exciting profession because at the end of the day you can see the results of your work, whether this is a completed bridge, a high-rise building, a subway station, or a hydroelectric dam. This program introduces

students to calculus, physics, and engineering applications and it includes courses that are design to transfer to Colorado State University and University of Colorado in order to continue studies in civil engineering. This is a designed career pathway in civil engineering. The Associate of Engineering Science (AES) degree prepares students to complete the second half of a Bachelor of Science (BS) in civil engineering at a four-year university, specifically Colorado State University and University of Colorado.

The AES in Civil Engineering requires you to enter prepared to take Calculus I (MAT 2410) and General College Chemistry I (CHE 1111). See an advisor to discuss testing out options, review transfer university requirements, and to develop an academic plan that works for you.

First Semester

MAT 2410	Calculus I: GT-MA1	5
CHE 1111	General College Chemistry I w/Lab: GT-SC1	5
EGG 1040	Engineering Projects	3
ENG 1021	English Composition I: GT-CO1	3
		Subtotal: 16

Second Semester

MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics: Calculus-Based I w/Lab: GT-SC1	5
EGG 1060	Intro to Engineering Computing	4
EGG 2011	Engineering Mechanics I - Statics	3
		Subtotal: 17

Semester Note: Students transferring to Colorado State University Fort Collins **must take Intro to Engineering Computing (EGG 1060).**

Students transferring to University of Colorado, **may take** either Intro to Engineering Computing (EGG 1060) **or** Computer Science I (CSC 1060) to fulfill this requirement. EGG 1060 is **preferred** for students transferring to the University of Colorado.

Third Semester

MAT 2430 or MAT 2431	Calculus III (2430) or Calculus III w/ Engineering Apps (2431)	4
CHE 1112 or PHY 2112	General College Chemistry II w/Lab (CHE 1112) or Calculus-Based Physics II w/Lab (PHY 2112)	5
EGG 2012	Engineering Mechanics II - Dynamics	3
GT-SS	Any Social & Behavioral Sciences (GT-SS) Course	3
		Subtotal: 15

Semester Note: Students transferring to Colorado State University Fort Collins **must take** General College Chemistry II w/Lab (CHE 1112). Students transferring to University of Colorado **must take** the Calculus-Based Physics II w/Lab (PHY 2112).

Fourth Semester

MAT 2562	Differential Equations with Linear Algebra	4
EGG 1050 and EGG 1051 or EGG 2030	Engineering Data Analysis (1050) and Experimental Design (1051) or Mechanical Solids (2030)	3
ELECTIVE	English Composition II or AES in Civil Elective*	3
ELECTIVE	AES in Civil Engineering Elective*	3
GT-AH	Environmental Ethics (PHI 2018) or Any GT-AH	3
		Subtotal: 16

Semester Note: Students transferring to Colorado State University Fort Collins **must take EGG 1050 and EGG 1051.** Students transferring to University of Colorado Boulder, University of Colorado Denver, University of Colorado Colorado Springs **must take EGG 2030**.

Students transferring to Colorado State University Fort Collins **must take ENG 1022 and one Science/Technical Elective.** These courses include Thermodynamics (EGG 2020), Physical Geology w/Lab (GEY 1111), General College Biology I w/Lab (BIO 1111), Botany (BIO 2121), Environmental Geology w/Lab (GEY 1135), and/or HLT 2140 Introductory Soil Science.

Students transferring to University of Colorado, **must take 6 credits of electives. One elective from CAD either** Civil 3D (CAD 2332) *which is preferred*, AutoCAD (CAD 1101 **and** CAD 1102), **or** Revit (CAD 2220). The other elective **must be completed from either** Intro to Programming (CSC 1019), Physical Geology (GEY 1111) **or** Thermodynamics (EGG 2020) to fulfill civil engineering requirements.

Total Credit Hours: 64
Important Program Notes:

***Associate of Engineering Science in Civil Engineering Electives** include: ENG 1022 is **required for students pursuing transfer** to Colorado State University Fort Collins. Students must also take one science/technical elective which includes: Thermodynamics (EGG 2020), Physical Geology (GEY 1111), General College Biology w/Lab (BIO 1111), Botany w/Lab (BIO 2121), Environmental Geology w/Lab (GEY 1135), or Introductory Soil Science (HLT 2140).

Students pursuing transfer to University of Colorado **must take 3 credits of electives from either** Civil 3D (CAD 2332) or Revit (CAD 2220), or 6 credits of AutoCAD (CAD 1101 **and** CAD 1102). The remaining 3 credits must be taken from either Thermodynamics (EGG 2020), Physical Geology (GEY 1111), or Intro to Programming (CSC 1019).

You **must complete a minimum of 64 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

BIOLOGY ASSOCIATE OF SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

There are **multiple ways** to pursue a **degree in biology**. It is **very important** to work with your **Pathways Advisor** to develop the best academic plan based on where you are **starting**, and where you are hoping to **transfer**.

For students who want to complete a degree in biology and are **academically prepared** to take **General College Chemistry I**

w/Lab (CHE 1111) and **Calculus I** (MAT 2410), the AS in Biology may be the **most direct path** to a **Bachelor's degree in this field**. The requirements for **biology degrees** at **transfer institutions** are **highly variable**. Therefore, a general AS degree may be a better fit. It is strongly recommended that you **meet** with your **Pathways Advisor** to create the **best academic plan for you.**

Program Description
This program is designed for students transferring to a four-year university to complete their BS degree in Biology. It allows students to complete the first two years of the BS degree at the community college. Students explore physics, chemistry and biology. Biology is the study of life and living beings, including their types, growth, structure, evolution, and where and how they live. Modern biology is very broad and it has many smaller areas, including the study of animals, plants, cells, genes, and other life science topics. This program introduces students to Biology and it includes courses that are common to all four-year institutions in Colorado. Careers often require a BS degree or higher. Career paths for Biology degree holders include pre-medicine, pre-pharmacy, pre-veterinary, physical therapy, dentistry, and many scientific arenas. The Associate of Science (AS) degree in Biology prepares students to complete the second half of a Bachelor of Science (BS) in Biology at a four-year university.

First Semester		
ENG 1021	English Composition I: GT-CO1	3
BIO 1111	General College Biology I w/Lab: GT-SC1	5
GT- AH	Any Arts & Humanities (GT-AH) Course	3
GT- SS	Any Social Sciences (GT-SS) Course	3
	Subtotal: 14	
Second Semester		
ENG 1022	English Composition II: GT-CO2	3
BIO 1112	General College Biology II w/Lab: GT-SC1	5
CHE 1111	General College Chemistry I w/Lab: GT-SC1	5
GT- HI1	Any History (GT-HI1) Course	3
	Subtotal: 16	
Third Semester		
ELECTIVE	Any Approved Elective List or Any GT-SC1	4
CHE 1112	General College Chemistry II w/Lab: GT-SC1	5
PHY 1111	Physics: Algebra-Based I w/Lab: GT-SC1	5
	Subtotal: 14	
Fourth Semester		
PHY 1112	Physics: Algebra-Based II w/Lab: GT-SC1	5
MAT 2410	Calculus I: GT-MA1	5
GT- SS	Any Social Sciences (GT-SS) Course	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
	Subtotal: 16	

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), BIO 1111 and CHE 1111 **are the Natural & Physical Sciences (GT-SC1) required courses.**

You **should be Calculus I (MAT 2410) and General College Chemistry I w/Lab (CHE 1111) ready.** If you are not prepared for MAT 2410 or CHE 1111, you **should take the needed prerequisites, College Algebra (MAT 1340), Pre-Calculus (MAT 1440) or Introduction to Chemistry I w/Lab CHE 1011, in your first semester.**

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) OR ENG 1022 (GT-CO2) and gtPathways-approved CO3 course (GT-CO3** (p. 18)**).**

Per the Statewide Transfer Articulation Agreement (STAA), if BIO 1112, CHE 1112, PHY 1111, and/or PHY 1112 are not required for the major at a receiving 4-institution, they w**ill be applied to the Bachelor's degree as elective credit toward graduation. Please check with the receiving institution to determine in which way these courses will be applied.**

You are strongly **encouraged to seek academic advising prior to registration regarding the acceptability of online science courses** if you anticipate transferring to a 4-year institution or completing graduate work in the sciences or health professions. It should be noted that per Colorado Revised Statute, §23-1-125(1)(e), general education courses taken online are guaranteed to satisfy core course (GT Pathways) requirements at all Colorado public institutions of higher education.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

CHEMISTRY ASSOCIATE OF SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

For **students** who want to complete a **degree in chemistry** and are **academically prepared** to take **General College Chemistry I w/Lab** (CHE 1111) and **Calculus I** (MAT 2410), the **AS in Chemistry** is the **most direct path** to a **Bachelor's degree** in this field.

It is important for students who are not college chemistry and calculus ready to **work with their Pathways Advisor** to develop the **best academic plan** based on where they are **starting**, and where they are hoping to **transfer.**

Program Description
This program is designed for students transferring to a four-year school to complete their BS degree in Chemistry. It allows students to complete the first two years of the BS degree at the community college. Students explore calculus, physics and chemistry. Chemistry is the study of the properties, structure, and change of matter. Students will explore atoms, chemical bonds and reactions, the way matter interacts, and the forces that give matter its properties. This program introduces students to Chemistry and it includes courses that are common to all four-year institutions in Colorado. Career paths for

Chemistry degree holders include research, quality control, drug research, chemical engineering, and national defense. The Associate of Science (AS) degree in Chemistry prepares students to complete the second half of a Bachelor of Science (BS) in Chemistry at a four-year university. Careers often require a BS degree or higher.

First Semester

CHE 1111	General College Chemistry I w/Lab: GT-SC1	5
MAT 2410	Calculus I: GT-MA1	5
ENG 1021	English Composition I: GT-CO1	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
		Subtotal: 16

Second Semester

CHE 1112	General College Chemistry II w/Lab: GT-SC1	5
MAT 2420	Calculus II: GT-MA1	5
ENG 1022	English Composition II: GT-CO2	3
GT- HI1	HIS 1120/2125/2015 or Any GT-HI1	3
		Subtotal: 16

Third Semester

CHE 2111	Organic Chemistry I w/Lab	5
PHY 2111	Physics: Calculus-Based I w/Lab: GT-SC1	5
MAT 2430 or MAT 2431	Calculus III (2430) or Calculus III w/ Engineering App (2431)	4
		Subtotal: 14

Semester Note: Per the Statewide Transfer Articulation Agreement (STAA), MAT 2430 **is required to complete the Chemistry Association of Science degree**. Based on faculty recommendations, some four-year institutions **will accept MAT 2431** as a substitution for MAT 2430. You **should work with your FRCC Pathway Advisor and check with your receiving four-year institution to ensure it will accept the MAT 2431 credit**. You **will need to work with the Office of the Registrar to finalize the graduation process**.

Fourth Semester

CHE 2112	Organic Chemistry II w/Lab	5
PHY 2112	Physics: Calculus-Based II w/Lab: GT-SC1	5
GT- SS	Any Social Sciences (GT-SS) Course	3
ELECTIVE	Any Approved Elective List Course	1
		Subtotal: 14

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) OR ENG 1022 (GT-CO2) and gtPathways-approved CO3 course (GT-CO3** (p. 18)**).**

Your chemistry and mathematics courses **carry heavy workloads.**

Per the Statewide Transfer Articulation Agreement (STAA), this statewide transfer articulation agreement in Chemistry does not fulfill requirements for the GT Pathways general education curriculum or the Associate of Science degree prior to transfer; however, this agreement **does guarantee you, if admitted, junior standing and completion of the baccalaureate degree within an additional 60 semester hours at the receiving institution.**

Per the Statewide Transfer Articulation Agreement (STAA), completion of the receiving institution's lower division general education requirements is **fulfilled only under the condition that one GT Pathways-approved course in arts and humanities (AH1, AH2, AH3, or AH4) and one GT Pathways-approved course in social and behavioral sciences (SS1, SS2, or SS3) are successfully completed at the receiving institution within the first 30 hours or 12 calendar months.**

Per the Statewide Transfer Articulation Agreement (STAA), if you are transferring to a four-year college/university under this Chemistry agreement, you are **encouraged to 'reverse' transfer the one GT Pathways course in arts and humanities and the one GT Pathways course in social and behavioral sciences back to your community college** in order to complete the GT Pathways general education program and to earn your Associate of Science degree with a Chemistry designation.

Lecture and laboratory portions of Organic Chemistry (CHE 2111 and CHE 2112), **must not be taken in an online delivery format.**

If you take more credits in mathematics than are listed, it **will reduce the 1 credit of elective needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

FERMENTATION SCIENCES ASSOCIATE OF SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students transferring to a four-year school to complete their BS degree in Fermentation Sciences. It allows students to complete the first two years of the BS degree at the community college. Students explore all aspects of the beer brewing, wine making and fermented foods industries. Students will learn about craft beer fermentation science, wort production, yeast fermentation, beer contaminants, brewery cleaning, beer styles through sensory tests and tastings, styles of wines and fermentation, and food fermentation lab experiences. Career paths for Fermentation Science degree holders include fermentation scientist or technician, production operator, brewer, cellar operator, brewery manager, winemaker, cheese maker, chef, and bakery positions. Students can earn an Associate of Science (A.S.) degree with a Fermentation Sciences designation at FRCC and transfer as a junior to Colorado State University or Metropolitan State University of Denver. FRCC offers a path to the vibrant beer brewing and fermented foods industries. Colorado ranks 3rd by the Brewer's Association in the number of craft breweries per capita and 1st on the economic impact per capita of all 50 states. Students MUST be 21 before enrolling in this program.

First Semester

ENG 1021	English Composition I: GT-CO1	3

BIO 1111	General College Biology I w/Lab: GT-SC1	5
FER 1001	Craft Beer Brewing	4
MAT 1340	College Algebra: GT-MA1	4
		Subtotal: 16

Second Semester

ENG 1022	English Composition II: GT-CO2	3
ELECTIVE	Any Approved Elective List Course	1
CHE 1011	Intro to Chemistry I w/Lab: GT-SC1	5
CIS 1015 or CIS 1018	Intro to Computer Information Systems (CIS 1015) or Intro to PC Applications (CIS 1018)	3
GT- HI1	Colorado History (HIS 2135) or Any GT-HI1	3
		Subtotal: 15

Third Semester

SOC 1001	Intro to Sociology I: GT-SS3	3
BIO 2108	General College Microbiology w/Lab: GT-SC1	5
GT- AH	LIT 1015/2025/2068, PHI 2005, or Any GT-AH	3
COM 1150	Public Speaking	3
		Subtotal: 14

Semester Note: General College Microbiology w/Lab (BIO 2108) **is offered at Boulder county Campus in the fall semester** and **at Larimer Campus in the spring semester.** If General College Microbiology w/Lab (BIO 2108) is not offered at your campus in the third semester, you **may take Physics Algebra-Based I w/Lab (PHY 1111) in its place.**

Fourth Semester

PHY 1111	Physics: Algebra-Based I w/Lab: GT-SC1	5
GT- AH	LIT 1015/2025/2068, PHI 2005, or Any GT-AH	3
GT- SS	ECO 2002, PSY 1001, or Any GT-SS1 or GT-SS2	3
FER 2001 or FER 2003	Wine Fundamentals (FER 2001) or Fermented Foods Science (FER 2003)	4
		Subtotal: 15

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you**may complete ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) OR ENG 1022 (GT-CO2) and gtPathways-approved CO3 course (GT-CO3).**

Per the Statewide Transfer Articulation Agreement (STAA), Public Speaking (COM 1150) **is the Oral Communication required course;** College Algebra (MAT 1340) **is the Mathematics (GT-MA1) required course; Intro to Sociology I** (SOC 1001) and Any GT-SS1 or GT-SS2 **is the Social & Behavioral Science (GT-SS) required courses;** and General College Biology I w/Lab (BIO 1111) and Intro to Chemistry I w/Lab (CHE 1011) **are the Natural & Physical Sciences (GT-SC1) required courses.**

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Forestry Wildlife Natural Resources

NATURAL RESOURCES TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Natural Resources Technology and enter the workforce. Students explore GIS systems, forest science principles, range land management, and wildlife and fisheries management. 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.

First Semester

NRE 1100	Foundations of Forestry	3
MATH	Career Mathematics (MAT 1140) or higher	3
ELECTIVE	NRE 1001 or Any NRE Degree Elective*	1
ELECTIVE	NRE 1214/2245 or Any NRE Degree Elective*	3
ELECTIVE	Wilderness Education (NRE 2065) or Principles of Outdoor Recreation (REC 2010)	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
		Subtotal: 16

Second Semester

GIS 1001	Introduction to Geographic Information Systems	3
NRE 2205	Wildlife & Fisheries Management	3
GEN EDU	BIO 1005/1111/2121	4
ELECTIVE	ENV 1111, GEY 1111, or Any NRE Degree Elective*	3
GEN EDU	Any Approved Elective List Course	2
		Subtotal: 15

Semester Note: Upon completion of NRE 2025, NRE 1100 or NRE 2205, and any emphasis course, you **should apply for the Environmental Education Certificate** (p. 101)**.**

Third Semester

NRE 2204	Range Management & Restoration	4
NRE 1021	Introduction to Hydrology	3
ELECTIVE	Wilderness Education (NRE 2065) or Principles of Outdoor Recreation (REC 2010)	3
GEN EDU	Any Approved Elective List Course	2
ELECTIVE	NRE 1110/1214/2015/2245 or Any NRE Degree Elective	2
		Subtotal: 14

Semester Note: NRE 2204 is only offered in the Fall.

Upon completion of GIS 1001, NRE 1100, NRE 2205, NRE 2204, and NRE 1021, you **should apply for the Natural Resources Certificate** (p. 101)**.**
Upon completion of GIS 1001, and 6 credits of any emphasis course, you **should apply for the Natural Resources Geographic Information Systems GIS Certificate** (p. 101)**.**

Upon completion of NRE 1100, NRE 1110, and 3 credits of electives (select from FSW 1000 and FSW 1001 or NRE 1021, NRE 2205, NRE 2015, NRE 2080, or NRE 2085), you **should apply for the Forestry Certificate** (p. 102)**.**

Fourth Semester

ELECTIVE	NRE 2025 or Any NRE Degree Elective*	3
ELECTIVE	AQT 1002, HLT 2140, or Any NRE Degree Elective*	4
ELECTIVE	NRE 1110/1214/2245/2015/2030 or NRE Degree Elective*	3
ELECTIVE	NRE 1110/1214/2245/2015/2030 or NRE Degree Elective*	3
GEN EDU	Any Approved Elective List Course	2
		Subtotal: 15

Semester Note: Upon completion of REC 2010, NRE 2065, and 3 credits of elective (**select one** course from AQT 2008, NRE 2000, NRE 2030, NRE 2032, NRE 2245, NRE 2080, or NRE 2085), you **should apply for the Natural Resources Recreation Certificate** (p. 101)**.**

Upon completion of NRE 2205, NRE 1214, and 3 credits of elective (**select one** course from AQT 2008 or NRE 1100, NRE 1110, NRE 2000, NRE 2204, NRE 2025, NRE 2030, NRE 2245, NRE 2080, or NRE 2085), you **should apply for the Wildlife Certificate** (p. 102)**.**

Total Credit Hours: 60
Important Program Notes:

***Natural Resource Technology AAS Degree Electives**: Any AQT course (p. 178), BIO 1005, BIO 1111, BIO 1112, BIO 2121, BIO 2122, CHE 1011, CHE 1111, CHE 1112, CHE 2105, ENV 1111, any FSW course (p. 210), GEY 1111, GIS 2010, GIS 2012, HLT 1101, HLT 2011, HLT 2140, OUT 1250, OUT 1255, OUT 1260, REC 2010, REC 2011, REC 2012, or any NRE course (p. 243).

You **must complete 3 credits** from either NRE 2025, NRE 2065, or REC 2010 to complete this degree.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

FORESTRY TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Forestry Technology and enter the workforce. Students explore GIS applications, tree care, soils, forestry research and harvesting, water movement, and wildlife and fisheries management. The Forestry Technology program teaches the principles of forest science and related fields, conduct forestry field research, and gain field skills in hydrology and soil science. This program prepares students for entry-level careers in forestry technology.

First Semester

NRE 1100	Foundations of Forestry	3
MATH	Career Mathematics (MAT 1140) or higher	3
NRE 1021	Introduction to Hydrology	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
ELECTIVE	NRE 1001 or Any Forestry Degree Elective*	1
ELECTIVE	NRE 2065/2204, REC 2010 or Any Forestry Degree Elective*	3
		Subtotal: 16

Second Semester

NRE 2205	Wildlife & Fisheries Management	3
GIS 1001	Introduction to Geographic Information Systems	3
NRE 1110	Forestry Field Techniques	3
HLT 2140	Introductory Soil Science	4
ELECTIVE	NRE 2025/2000 or Any Forestry Degree Elective*	2
		Subtotal: 15

Third Semester

NRE 2015	Fire Ecology	3
BIO 2121	Botany w/Lab: GT-SC1	5
HLT 2011	Arboriculture	3
GEN EDU	Any Approved Elective List Course	3
		Subtotal: 15

Semester Note: Upon completion of GIS 1001, GIS 2010 or GIS 2012, and any emphasis course, you **should apply for the Natural Resources Geographic Information Systems GIS Certificate** (p. 101)**.**

Upon completion of REC 2010, NRE 2065, and 3-5 credits of elective (select one **course from AQT 2008, NRE 2000, NRE 2030, NRE 2032, NRE 2245, NRE 2080, or NRE 2085), you** should apply for the Natural Resources Recreation Certificate (p. 101).

Upon completion of NRE 1100, NRE 1110, and any emphasis course, you **should apply for the Forestry Certificate** (p. 102)**.**

Upon completion of NRE 2205, NRE 1214, and 3-5 credits of elective (select one course from AQT 2008, BIO 2122, NRE 2000, NRE 2204, NRE 2025, NRE 2030, NRE 2245, or NRE 2080), you **should apply for the Wildlife Certificate** (p. 102)**.**

Fourth Semester

GEN EDU	Any Approved Elective List Course	3
GIS 2012	GIS Remote Sensing - Digital Image	4
NRE 2028	Forest Harvesting	3
NRE 2080	Internship	3*
ELECTIVE	GIS 2010, NRE 2025 or Any Forestry Degree Elective*	2
		Subtotal: 14

Semester Note: Upon completion of NRE 2025, NRE 1100 or NRE 2205, and any emphasis course, you **should apply for the Environmental Education Certificate** (p. 101)**.**

Total Credit Hours: 60
Important Program Notes:

To fulfill Forestry AAS degree requirements, you **must complete a minimum of 8 Forestry AAS degree elective credits.** In addition, students **may not apply more than 6 credits in Internship or Independent Study programs** to any AAS degree pathway in Forestry, Wildlife, and Natural Resources.

***Forestry AAS Degree electives:** BIO 1111, BIO 1112, BIO 2122, CHE 1011, ENV 1111, any FSW course (p. 210), GIS 2010, NRE 1001, NRE 1214, NRE 2000, NRE 2204, NRE 2030, NRE 2032, NRE 2065, NRE 2078, NRE 2085, OUT 1250, OUT 1255, OUT 1260, REC 2010, REC 2011, or REC 2012.

If you take MAT 1150 or MAT 1340 or more credits in mathematics than are listed, it **will increase the total credits for the degree.**

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

WILDLIFE TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Wildlife Technology and enter the workforce. Students explore skills in wildlife, aquaculture, fisheries, natural resource management and computer analysis of natural resources. The Wildlife Technology program focuses on principles and research techniques to assist in wildlife and land management. Includes practical field skills, and theory and applications for the study and management of wildlife, fisheries, and wild bird populations. This program prepares students for a career as a wildlife technician. The AAS degree in Wildlife Technology at Front Range Community College has received a three-year accreditation from the North American Wildlife Technology Association (NAWTA).

First Semester

NRE 1214	Colorado Wildlife	3
MATH	Career Mathematics (MAT 1140) or higher	3
NRE 1100	Foundations of Forestry	3
ELECTIVE	NRE 1001 or Any Wildlife Degree Elective*	1
ELECTIVE	NRE 2032/1021/2065, REC 2010 or Any Wildlife Degree Elective*	2
GEN EDU	Any Approved Elective List Course	3

Subtotal: 15

Semester Note: You should select 3 credits of electives this semester.

Second Semester

GEN EDU	Any Approved Elective List Course	3
NRE 2205	Wildlife & Fisheries Management	3
GIS 1001	Introduction to Geographic Information Systems	3
ENGLISH	Composition I/II (ENG 1021/22) or Technical Writing (ENG 1031)	3
ELECTIVE	ENV 1111, HLT 2140, or NRE 2025 or Any Wildlife Degree Elective*	3

Subtotal: 15

Semester Note: Upon completion of NRE 2205, NRE 1214, and 3-5 credits of elective (select one course from AQT 2008, BIO 2122, NRE 2000, NRE 2204, NRE 2025, NRE 2030, NRE 2245, or NRE 2080), you **should apply for the Wildlife Certificate** (p. 102)**.**

Upon completion of NRE 1100, NRE 1110, and any emphasis course, you **should apply for the Forestry Certificate** (p. 102)**.**

Third Semester

BIO 1111	General College Biology I w/Lab: GT-SC1	5
NRE 2245	Avian Conservation/Ornithology	3
NRE 2204	Range Management & Restoration	4
ELECTIVE	NRE 1110/1021/2065 or REC 2010, or Any Wildlife Degree Elective	3

Subtotal: 15

Semester Note: Upon completion of NRE 2025, NRE 1100 or NRE 2205, and any emphasis course, you **should apply for the Environmental Education Certificate** (p. 101)**.**

Upon completion of GIS 1001, GIS 2010 or GIS 2012, and any emphasis course, you **should apply for the Natural Resources Geographic Information Systems GIS Certificate** (p. 101)**.**

Upon completion of GIS 1001, NRE 1100, NRE 2205, and NRE 1021 or any emphasis course, you **should apply for the Natural Resources Certificate** (p. 101)**.**

Fourth Semester

NRE 2055	Wildlife Field Techniques	4
AQT 2008	Fish Biology and Ichthyology	5
ELECTIVE	NRE 1110/1021/2065 or REC 2010, or Any Wildlife Degree Elective	3
NRE 2030	Wildlife Law Enforcement	3

Subtotal: 15

Semester Note: Upon completion of REC 2010, NRE 2065, and 3-5 credits of elective (**select one** course from AQT 2008, NRE 2000, NRE 2030, NRE 2032, NRE 2245, NRE 2080, or NRE 2085), you **should apply for the Natural Resources Recreation Certificate** (p. 101)**.**

Total Credit Hours: 60
Important Program Notes:

You **must select 12 total credits** from Wildlife AAS degree electives*. You also **must complete 6 credits** from the Approved Elective List to **satisfy general education requirements** for this degree.

You **cannot apply more than 6 credits** in Internship or Independent Study programs to the Wildlife Technology AAS Degree.

***Wildlife Technology AAS Degree elective courses:** BIO 2121, BIO 2122, CHE 1011, CHE 1111, ENV 1111, FSW 1000, FSW 1001, FSW 1033, GIS 2010, GIS 2012, HLT 2140, NRE 1001, NRE 1110, NRE 1021, NRE 2000, NRE 2015, NRE 2025, NRE 2032, NRE 2065, NRE 2078, NRE 2080, NRE 2085, REC 2010, REC 2011, or REC 2012.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Forestry Wildlife and Natural Resources Certificates

NATURAL RESOURCES CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Natural Resources and enter the workforce. Students explore GIS, forest science principles, range land, wildlife, and fisheries management. This certificate program builds on the Forestry certificate and covers theory, philosophy, and applications for study and management of wildlife and fisheries resources. Field and laboratory methods are introduced. This program prepares students for entry-level careers in a variety of natural resources, forestry, wildlife and fisheries settings.

First Semester

GIS 1001	Introduction to Geographic Information Systems	3
NRE 1100	Foundations of Forestry	3
NRE 2205	Wildlife & Fisheries Management	3
NRE 2204	Range Management & Restoration	4
NRE 1021	Introduction to Hydrology	3
	Subtotal:	**16**

Total Credit Hours: 16
Important Program Notes:

NRE 2204 **is offered only in the fall.** This certificate **can be completed in one semester** if taken in the fall semester.

NATURAL RESOURCES GEOGRAPHIC INFORMATION SYSTEMS GIS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Natural Resources Geographic Information Systems and enter the workforce. Students explore GIS applications, remote sensing, spatial principles and problem-solving skills. This certificate program introduces students to basic and advanced analytical tools as they develop skills in spatial problem solving. This program prepares students for entry-level careers in natural resources and GIS-related settings.

First Semester

GIS 1001	Introduction to Geographic Information Systems	3
ELECTIVE	Any Natural Resources GIS Certificate Elective*	3
	Subtotal:	**6**

Second Semester

GIS 2010 or GIS 2012	GIS (GIS 2010) or GIS Remote Sensing-Digital Image (GIS 2012)	3
	Subtotal:	**3**

Total Credit Hours: 9
Important Program Notes:

***Natural Resources (NRE) Geographic Information Systems (GIS) Certificate Elective:** You **may select courses** from the following: Any AQT course (p. 178), BIO 1005, BIO 1111, BIO 1112, BIO 2121, BIO 2122, CHE 1011, CHE 1111, CHE 1112, CHE 2105, ENV 1111, FSW 1000, FSW 1001, FSW 1043, GEY 1111, GIS 2010, GIS 2012, HLT 1101, HLT 2011, HLT 2140, OUT 1250, OUT 1255, OUT 1260, REC 2010, REC 2011, REC 2012, or any NRE course (p. 243).

NATURAL RESOURCES RECREATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Natural Resources Recreation and enter the workforce. Students explore outdoor recreation principles and wilderness education. This certificate program combines lecture and practical outdoor experiences relating to problems and trends in outdoor recreation. This program prepares students for entry-level careers in a natural resource recreation specialist setting.

First Semester

REC 2010	Principles of Outdoor Recreation	3
REC 2011	Outdoor Leadership	2
NRE 2065	Wilderness Education	3
	Subtotal:	**8**

Semester Note: REC 2010 and NRE 2065 are **taught in the fall.**

Total Credit Hours: 8

ENVIRONMENTAL EDUCATION CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Environmental Education and enter the workforce. Students explore forest science principles and wildlife and fisheries management. This certificate program introduces students to the history, legislation, principles, and goals of environmental literacy and education. This program prepares students for entry-level careers in parks, recreation, forestry, or nature education settings.

First Semester

NRE 2025	Environmental Education	3
ELECTIVE	Foundations of Forestry (NRE 1100) or Wildlife & Fisheries Mgmt Principles (NRE 2205)	3
ELECTIVE	Any Environmental Education Certificate Elective*	3
	Subtotal: 9	

Semester Note: NRE 2025 offered only in Spring at Larimer Campus.

Total Credit Hours: 9
Important Program Note:

***Environmental Education Certificate Elective:** You **may select courses** from the following: Any AQT course (p. 178), BIO 1005, BIO 1111, BIO 1112, BIO 2121, BIO 2122, CHE 1011, CHE 1111, CHE 1112, CHE 2105, ENV 1111, FSW 1000, FSW 1001, FSW 1043, GEY 1111, GIS 2010, GIS 2012, HLT 1101, HLT 2011, HLT 2140, OUT 1250, OUT 1255, OUT 1260, REC 2010, REC 2011, REC 2012, or any NRE course (p. 243).

FORESTRY CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Forestry and enter the workforce. Students explore a variety of forest and land management principles. This certificate program introduces students to the principles of forest science, dendrology, forest fire behavior, silviculture principles, and research techniques. This program prepares students for entry-level careers in forestry, land use, or park settings.

First Semester

NRE 1100	Foundations of Forestry	3
NRE 1110	Forestry Field Techniques	3
ELECTIVE	FSW 1000/1001 or Any Forestry Certificate Elective*	3
	Subtotal: 9	

Total Credit Hours: 9
Important Program Notes:

Forestry Certificate Electives*: BIO 1111, BIO 1112, BIO 2121, BIO 2122, CHE 1011, ENV 1111, any FSW course (p. 210), GIS 2010, NRE 1001, NRE 1214, NRE 1021, NRE 2000, NRE 2204, NRE 2205, NRE 2015, NRE 2030, NRE 2032, NRE 2065, NRE 2078, NRE 2080, NRE 2085, OUT 1250, OUT 1255, OUT 1260, REC 2010, or REC 2011.

WILDLAND FIRE CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Wildland Fire and enter the workforce. Students explore characteristics of wildfire, firefighter skills, and fire ecology. This certificate program provides instruction on environmental factors that affect the start and spread of wildfire and recognition of potentially hazardous situations. Entry-level wildland firefighter skills are taught. Successful completion of this certificate can lead to a "Red Card," the Interagency Incident Qualification Card for an entry-level career as a wildland firefighter.

First Semester

FSW 1000	S-190 Introduction to Wildland Fire	1
FSW 1001	S-130 Firefighting Training	2
FSW 1033	Wildland Fire Practitioner Lab	1
FSW 1043	S-212 Wildfire Chain Saws	2
	Subtotal: 6	

Total Credit Hours: 6

WILDLIFE CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Wildlife and enter the workforce. Students explore wildlife management, wildlife law enforcement, and the study of Colorado native wildlife. This certificate program covers theory, philosophy, and applications for the study and management of wildlife and fisheries resources. This program prepares the student for an entry-level career as a wildlife management specialist or technician.

First Semester

NRE 2205	Wildlife & Fisheries Management	3
NRE 1214	Colorado Wildlife	3

ELECTIVE	AQT 2008 or Any Wildlife Certificate Elective*	3

Subtotal: 9

Total Credit Hours: 9
Important Program Notes:

***Wildlife Certificate Electives:** AQT 2008, BIO 2121, BIO 2122, CHE 1011, CHE 1111, ENV 1111, FSW 1000, FSW 1001, GIS 1001, GIS 2010, GIS 2012, HLT 2140, NRE 1001, NRE 1110, NRE 1021, NRE 2000, NRE 2204, NRE 2015, NRE 2025, NRE 2030, NRE 2032, NRE 2245, NRE 2065, NRE 2078, NRE 2080, NRE 2085, REC 2010, REC 2011, or REC 2012.

This certificate **can be spread out over multiple semester**s or **completed in one semester in spring**. Total number of semester/certificate credits vary depending on chosen elective.

Geographic Information Systems

GEOSPATIAL SCIENCE BACHELOR OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a four-year BAS Degree in Geospatial Science and enter the workforce. Students explore both theoretical and practical experience in geospatial science. This degree path prepares students to perform professional geospatial science-based work using geographic information systems (GIS), remote sensing, programming, databases, unmanned aerial vehicles (UAVs), and global navigation satellite system (GNSS) technologies. Upon completion, students will be qualified for career opportunities in numerous fields such as analyst, scientist, instructor, and biological science or security agency environments. Students will also be qualified to continue on to a Master's program in a geospatial field if desired.

This BAS degree is intended to be a continuation of the AAS in GIS from Front Range Community College, but the courses are open to non-degree seeking students as well. All students must complete the GIS Certificate coursework along with MAT 1260 (Introduction to Statistics), and ENG 1021 (English Composition I) prior to beginning upper-level coursework for the BAS.

Transfer credits from accredited programs will be considered.

First Semester

ENG 1031	Technical Writing I: GT-CO1	3
GIS 1040	Vector Based GIS	3
GIS 1010	Intro to Cartography for GIS	3
GIS 1050	Relational Database Mgmt for GIS	3
ELECTIVE	Business Communications (BUS 2017) or Principles of Marketing (MAR 2016)	3

Subtotal: 15

Second Semester

GIS 1031	Global Positioning Sys for GIS	3
GIS 2040	Raster Based GIS	3
MAT 1260	Intro to Statistics: GT-MA1	3
GIS 2035	INT Remote Sensing/Image Analysis	4
COM 2300	Intercultural Communication: GT-SS3	3

Subtotal: 16

Semester Note: Upon completion of GIS 1040, GIS 1010, GIS 1050, and GIS 1031, you **should apply for the Foundations of Geographic Information Systems Certificate** (p. 105)**.**

Third Semester

GIS 1065	GIS Project Management	3
GIS 2060	GIS Survey I	3
GIS 2005	GIS Applications	3
GIS 2011	Spatial Data Modeling & Analysis for GIS	4
ELECTIVE	Entrepreneurial Operations (BUS 1002) or Small Business Management (MAN 2016)	3

Subtotal: 16

Fourth Semester

GIS 2061	GIS Survey II	3
GEO 1011 or GEY 1135	Physical Geography Landforms w/Lab (GEO 1011) or Environmental Geology (GEY 1135)	4
GIS 2042	UAS Operations/Data Processing	3
GIS 2080 or GIS 2089	Internship (GIS 2080) or Capstone (GIS 2089)	3

Subtotal: 13

Semester Note: Upon completion of GIS 1040, GIS 1010, GIS 1050, GIS 1031, GIS 1065, GIS 2005, GIS 2040, GIS 2011, and GIS 2035, you **should apply for the Geographic Information Systems Certificate** (p. 104)**.**

Fifth Semester

GIS 3035	Geospatial Statistics	4
CSC 1019	Introduction to Programming	3
GIS 3001	GIS for Natural Sciences	3
GIS 3050	Advanced Database for GIS	4
GEO 1006	Human Geography: GT-SS2	3

Subtotal: 17

Sixth Semester

ELECTIVE	MGD 1012/1033/1041	3
GIS 4010	Geomorphology and GIS	4
GIS 4011	Hydrology Analysis with GIS	4
CSC 1060	Computer Science I: (Language)	4

Subtotal: 15

Seventh Semester

GIS 3012	Advanced Remote Sensing	4
GIS 3011	Advance Spatial Analysis	4
GIS 3005	Programming for GIS	3
GEN EDU	PHY 1105, BIO 1005/2121, CHE 1005, or GEO 1011	4

Subtotal: 15

Eighth Semester

GIS 4012	Photogrammetry and LiDAR	4
ELECTIVE	Geospatial BAS Degree Electives*	3
GIS 4088	Practicum	4
ELECTIVE	Geospatial BAS Degree Electives*	2

Subtotal: 13

Total Credit Hours: 120
Important Program Notes:

***Geospatial BAS Degree Electives:** May be taken from any of the following areas of study: Biology (BIO), Business (BUS (p. 185)), Computer Information Systems (CIS (p. 189)), Computer Web-Based (CWB (p. 195)), Computer Science (CSC (p. 194)), Geography (GEO (p. 210)), Geospatial Information Science, (GIS (p. 212)), Management (MAN (p. 233)), and Multimedia Design (MGD (p. 237)).

You **must complete a minimum of 120 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

GEOSPATIAL SCIENCE ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two-year AAS Degree in Geospatial Science and enter the workforce. Students explore the development, application and principles of geographic information systems. This two-year degree prepares the student for a career in high-tech fields, including photogrammetry, cartography, geographical information systems, global positioning systems, and satellite remote sensing. Students learn how to: acquire geospatial information from a variety of sources, interpret, use and manage geospatial data for a given purpose, and how to use geographic information system software for storage, manipulation, and analysis of geospatial data.

First Semester

ENG 1031	Technical Writing I: GT-CO1	3
GIS 1040	Vector Based GIS	3
GIS 1010	Intro to Cartography for GIS	3
GIS 1050	Relational Database Mgmt for GIS	3
GEN EDU	Business Communications (BUS 2017) or Principles of Marketing (MAR 2016)	3
	Subtotal:	**15**

Second Semester

GIS 1031	Global Positioning Sys for GIS	3
GIS 2040	Raster Based GIS	3
MAT 1260	Intro to Statistics: GT-MA1	3
GIS 2035	INT Remote Sensing/Image Analysis	4
COM 2300	Intercultural Communication: GT-SS3	3
	Subtotal:	**16**

Semester Note: Upon completion of GIS 1040, GIS 1010, GIS 1050, and GIS 1031, you **should apply for the Foundations of Geographic Information Systems Certificate** (p. 105)**.**

Third Semester

GIS 1065	GIS Project Management	3
GIS 2060	GIS Survey I	3
GIS 2005	GIS Applications	3
GIS 2011	Spatial Data Modeling & Analysis for GIS	4
GEN EDU	Entrepreneurial Operations (BUS 1002) or Small Business Management (MAN 2016)	3
	Subtotal:	**16**

Semester Note: Upon completion of GIS 1040, GIS 1010, GIS 1050, GIS 1031, GIS 1065, GIS 2005, GIS 2040, GIS 2011, and GIS 2035, you **should apply for the Geographic Information Systems Certificate** (p. 104)**.**

Fourth Semester

GIS 2061	GIS Survey II	3
GEO 1011 or GEY 1135	Physical Geography Landforms w/Lab (GEO 1011) or Environmental Geology (GEY 1135)	4
GIS 2042	UAS Operations/Data Processing	3
GIS 2080 or GIS 2089	Internship (GIS 2080) or Capstone (GIS 2089)	3
	Subtotal:	**13**

Total Credit Hours: 60

Important Program Notes:

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a three semester Certificate in Geographic Information Systems and enter the workforce. Students explore the relationships of geographic information systems, cartography, global positioning systems, and database and project management. This certificate program prepares students for careers in assisting scientists, engineers, technologists, and other professionals in building, maintaining, modifying, and using GIS databases.

First Semester

GIS 1040	Vector Based GIS	3
GIS 1010	Intro to Cartography for GIS	3
GIS 1050	Relational Database Mgmt for GIS	3
	Subtotal:	**9**

Second Semester

GIS 1031	Global Positioning Sys for GIS	3
GIS 1065	GIS Project Management	3
GIS 2005	GIS Applications	3
GIS 2040	Raster Based GIS	3
	Subtotal:	**12**

Semester Note: Upon completion of GIS 1040, GIS 1010, GIS 1050, and GIS 1031, you **should apply** for the **Foundations of Geographic Information Systems Certificate** (p. 105).

Third Semester		
GIS 2011	Spatial Data Modeling & Analysis for GIS	4
GIS 2035	INT Remote Sensing/Image Analysis	4
		Subtotal: 8

Total Credit Hours: 29

FOUNDATIONS OF GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Foundations of Geographic Information Systems and enter the workforce. Students explore GIS principles, global positioning systems, map communication, and databases. This certificate program also introduces students to geographic information systems and cartography. Students work with advanced analytical tools and develop skills in spatial problem solving. This program prepares the student for entry-level careers in a variety of GIS-related business settings.

First Semester		
GIS 1040	Vector Based GIS	3
GIS 1010	Intro to Cartography for GIS	3
		Subtotal: 6
Second Semester		
GIS 1031	Global Positioning Sys for GIS	3
GIS 1050	Relational Database Mgmt for GIS	3
		Subtotal: 6

Total Credit Hours: 12

GEOLOGY ASSOCIATE OF SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

There are **multiple ways** to pursue a **degree in geology** (geosciences). It is very **important** to **work** with your **Pathways Advisor** to develop the **best academic plan** for where you are **starting** and where you are hoping to **transfer**.

For students who want to complete a **degree in geology** and are **calculus ready**, the AS in Geology is the most direct path to a Bachelor's degree in this field. It is recommended that you **meet** with your **advisor** before selecting a **pathway in geology.**

Program Description

This program is designed for students transferring to a four-year university to complete their BS degree in Geology or Earth Science. It allows students to complete the first two years of the BS degree at the community college. Geology is the study of the Earth, its rocks, and the ways that they change over time. Geology students explore the movement of the Earth's crust, the history of life on Earth, and past climates. It is important for mineral and fossil fuel exploration, managing water resources, and solving environmental problems. This program introduces students to Geology and it includes courses that are common to all four-year institutions in Colorado. Careers often require a BS or higher. Career paths for Geology degree holders include resource management, mining, oil and gas exploration, and climate research. The Associate of Science (AS) degree in Geology prepares students to complete the second half of a Bachelor of Science (BS) in Geology at a four-year university.

First Semester		
ENG 1021	English Composition I: GT-CO1	3
CHE 1111	General College Chemistry I w/Lab: GT-SC1	5
MAT 2410	Calculus I: GT-MA1	5
ELECTIVE	Any Approved Elective List Course	1
		Subtotal: 14
Second Semester		
GT- AH	Any Arts & Humanities (GT-AH) Course	3
ENG 1022	English Composition II: GT-CO2	3
CHE 1112	General College Chemistry II w/Lab: GT-SC1	5
MAT 2420	Calculus II: GT-MA1	5
		Subtotal: 16
Third Semester		
GEY 1111	Physical Geology w/Lab: GT-SC1	4
PHY 2111	Physics: Calculus-Based I w/Lab: GT-SC1	5
GT- HI1	Any History (GT-HI1) Course	3
GT- SS	Any Social Sciences (GT-SS) Course	3
		Subtotal: 15
Fourth Semester		
GEY 1112	Historical Geology w/Lab: GT-SC1	4
PHY 2112	Physics: Calculus-Based II w/Lab: GT-SC1	5
GT- SS	Any Social Sciences (GT-SS) Course	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
		Subtotal: 15

Semester Note: GEY 1112 **is ONLY offered** in the the spring semesters.

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3 (p. 18)).

Per the Statewide Transfer Articulation Agreement (STAA), credits for additional required courses (GEY 1111, GEY 1112, MAT 2420, PHY 2111, and PHY 2112) **may not be required for the major at a receiving 4-year institution.** If not required, they **will be applied to the Bachelor's degree as elective credit toward graduation.** Please **check with the receiving**

institution to determine in which way these courses will be applied.

If you take more credits in mathematics and science than are listed, it **will reduce the 1 credit of electives needed.**

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Horticulture and Landscape Technologies

HORTICULTURE & LANDSCAPE TECHNOLOGIES ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Horticulture & Landscape Technologies and enter the workforce. Students explore a vast array of horticulture and landscape skills, techniques and concepts. This AAS degree prepares the student for a wide range of careers in landscape contracting and ornamental horticulture. For this degree students complete the Horticulture Certificate (p. 108) and select an area of specialization from the following:

- Irrigation Technician
 (p. 110)- Floral Design (p. 107)
- Landscape Contracting Technician (p. 108)
- Landscape Design (p. 108)
- Landscape Maintenance Technician (p. 109)
- Greenhouse and Nursery Management (p. 109)

First Semester

HLT 1101	Introduction to Horticulture	4
ELECTIVE	Any HLT/FLD/TRE Course	4
ELECTIVE	Any Computer Elective*	3
MATH	Career Mathematics (MAT 1140) or Higher	3
	Subtotal: 14	

Second Semester

HLT 2140	Introductory Soil Science	4
GEN EDU	ENG 1021/1022, ENG 1031, or COM 1150/1250	3
GEN EDU	Principles of Microeconomics (ECO 2002) or Macroeconomics (ECO 2001)	3
GEN EDU	SPA 1001 or Higher	3
ELECTIVE	Any HLT/FLD/TRE Course	3
	Subtotal: 16	

Semester Note: Upon completion of HLT 1101, MAT 1140 or higher, HLT 2140, and 7 credits of HLT or FLD courses, you **should apply for the Horticulture Certificate** (p. 108)**.**

Upon completion of HLT 1050 and HLT 1051, you **should apply for the Irrigation Technician Certificate** (p. 110)**.**

Third Semester

ELECTIVE	Any HLT/FLD/TRE Course	2
ELECTIVE	Any HLT AAS Degree Elective**	4
ELECTIVE	HLT 2080/2087*** or Any HLT/FLD/TRE Course	3
GEN EDU	BIO 1005/1111/2121 or CHE 1011 or Higher	4
ELECTIVE	Entrepreneurial Operations (BUS 1002) or Small Business Management (MAN 2016)	3
	Subtotal: 16	

Semester Note:

***You **may take HLT 2080/HLT 2087 in third or fourth semester**. Faculty recommend you **take HLT 2080/HLT 2087 in fourth semester** to have exposure to increase skills learned in additional HLT courses benefitting the employer. For more information, contact the HLT Program Director.

Upon completion of HLT 1030, HLT 1032, CAD 1101 or CAD 1110, HLT 2030, HLT 2080 or HLT 2087, and HLT 2032, you **should apply for the Landscape Design Certificate** (p. 108)**. Offered at Westminster ONLY.**

Upon completion of HLT 2010, HLT 1050 or HLT 2102, HLT 2023, HLT 1051 or HLT 2008, HLT 2080 or HLT 2087, and 3 credits of elective (**select one** course from HLT 2011, HLT 2021, or HLT 2022), you **should apply for the Landscape Maintenance Technician Certificate** (p. 109)**.**

Upon completion of HLT 1060, HLT 2080 or HLT 2087, HLT 2102 or HLT 2160, and take 2-4 credits of electives (**select two** courses from HLT 2021, HLT 2022, HLT 2023, HLT 2024, or HLT 2026), you **should apply for the Greenhouse and Nursery Management Certificate** (p. 109)**.**

Fourth Semester

ELECTIVE	Any HLT/FLD/TRE Course	2
ELECTIVE	Any HLT AAS Degree Elective**	3
ELECTIVE	Any HLT AAS Degree Elective**	3
ELECTIVE	HLT 2080/2087*** or Any HLT/FLD/TRE Course	3
ELECTIVE	Any Computer Elective*	3
	Subtotal: 14	

Total Credit Hours: 60

Important Program Notes:

You **must complete 17 credits** of HLT, FLD, and/or TRE[1] electives. You **may complete up to an additional 10 credits** from the Horticulture AAS Degree Electives**.

***Computer Elective:** CAD 1101, CAD 1102, CAD 1110, CAD 2400, CAD 2210, CIS 1018, CIS 1028, CIS 1035, CIS 1045, CIS 1055, CWB 1010, GIS 1001, GIS 1010, MGD 1011, or MGD 1012.

****Horticulture (HLT) AAS Degree Elective:**
Any HLT or FLD course, or BIO 2121, CHE 1011, CHE 1111, CHE 2105, COM 1150, ECO 2001, ECO 2002, GEY 1111, MAT 1340,

MAT 1440, PHY 1111, PHY 1112, PSY 1001, SPA 1011, or SPA 1012.

***You **may take HLT 2080** (p. 218) **/ HLT 2087** (p. 218) in third or fourth semester. **Faculty recommend** you take HLT 2080 / HLT 2087 in fourth semester to have exposure to increased skills learned in additional HLT courses benefiting the employer and experience. For more information, contact the HLT Program Director.

[1]TRE credit **must be completed** through the Prior Learning Assessment (PLA) process.

Semester elective credits **may vary depending on semester completions.**

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

HORTICULTURE BUSINESS MANAGEMENT ASSOCIATE OF SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students transferring to a four-year university to complete their BS degree in Horticulture Business Management. It allows students to complete the first two years of the BS degree at the community college. Students explore a wide range of horticulture and landscape related business practices. Entry-level career options include landscaping firms, florists, plant nurseries, and greenhouses. This program introduces students to Horticulture Business Management and it includes courses that are common to all four-year institutions in Colorado. This AS degree prepares the student to transfer to Colorado State University in Fort Collins to pursue a B.S. degree in Horticulture with a Horticulture Business Management concentration. The Associate of Science (AS) degree prepares students to complete the second half of a Bachelor of Science (BS) program at a four-year university.

First Semester		
ELECTIVE	Any HLT/FLD or Approved Elective List Course	4
CIS 1018	Introduction to PC Applications	3
MAT 1340	College Algebra: GT-MA1	4
BIO 2121	Botany w/Lab: GT-SC1	5
		Subtotal: 16
Second Semester		
HLT 1101	Introduction to Horticulture	4
ENG 1021	English Composition I: GT-CO1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
GT- AH	Any GT-AH1, GT-AH2, GT-AH3, or GT-AH4 Course	3
ELECTIVE	Any HLT/FLD or Approved Elective List Course	3
		Subtotal: 16
Third Semester		
ECO 2001	Principles of Macroeconomics: GT-SS1	3
HLT 2160	Plant Propagation	4
ENG 1022	English Composition II: GT-CO2	3
GT- SC1	CHE 1011/1111	5
		Subtotal: 15
Fourth Semester		
HLT 2140	Introductory Soil Science	4
GT- HI1	Any History (GT-HI1) Course	3
GT- AH	Any GT-AH1, GT-AH2, GT-AH3, or GT-AH4 Course	3
REQUIRED	MAT 1260 or BUS 2026	3
		Subtotal: 13

Total Credit Hours: 60
Important Program Notes:

BIO 2121 is **recommended.** BIO 1111 and BIO 1112 **may also be used** to complete these degree requirements; BIO 1111 is a prerequisite for BIO 1112. Taking these courses **would reduce your overall additional required credits by 5 credits.**

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), for recommended elective, **choose additional HLT or FLD courses** (except for HLT 2008 or FLD 1000).

Per the Statewide Transfer Articulation Agreement (STAA), if HLT 2140, BUS 2026 or MAT 1260, CIS 1018, HLT 2160, or HLT 1101 or HLT 1000 **are not required for the major** at a receiving 4-year institution, they **will be applied to the Bachelor's degree as elective credit toward graduation.** Please **check with the receiving institution** to determine in which way these courses will be applied.

Students completing the AS in Horticulture Business Management should also **apply and receive the Horticulture Certificate** when the requirements are met.

If you take more credits in mathematics and science than are listed, it **will reduce the 7 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Horticulture and Landscape Technologies Certificates

FLORAL DESIGN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a three semester Certificate in Floral Design. Students may enter

the workforce during the third semester of the program. Students explore floral design concepts, techniques, and identification, usage, and culture of plants. This program prepares the student for a career to work in or own a floral business. In addition to learning about floral design and arrangements, students will learn about flower shop management and flower care for tropical and indoor plants.

First Semester

FLD 1000	Introductory Floral Design	3
MATH	MAT 1140 or Higher	3
ELECTIVE	Annuals, Bulbs, & Grasses (HLT 2023) or Interior Plants (HLT 2026)	2
		Subtotal: 8

Second Semester

FLD 2000	Advanced Floral Design	3
		Subtotal: 3

Third Semester

FLD 2089	Capstone	4
INTERNSHIP	Internship (HLT 2080) or Cooperative Education (HLT 2087)	3
		Subtotal: 7

Total Credit Hours: 18
Important Program Notes

Students pursuing AAS degree must also take HLT 1101 and HLT 2140.

HORTICULTURE CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Horticulture and enter the workforce. Students explore the biology of horticultural plants, soil conditions, and fertilizer principles. This certificate program allows students with unique career goals in the horticulture industry to design their own degree with faculty guidance.

First Semester

HLT 1101	Introduction to Horticulture	4
MATH	MAT 1140 or Higher	3
ELECTIVE	Any HLT/FLD Course	3
		Subtotal: 10

Second Semester

HLT 2140	Introductory Soil Science	4
ELECTIVE	Any HLT/FLD Course	4
		Subtotal: 8

Total Credit Hours: 18
Important Program Notes:

Elective courses may be applicable to several certificates. Completion of this certificate is required to earn the AAS degree in Horticulture.

LANDSCAPE DESIGN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a three semester Certificate in Landscape Design and enter the workforce. Students explore CAD or Sketchup software, sustainable landscape practices, landscape design and business practices. This program prepares the student for a career as a residential landscape designer.

First Semester

HLT 1030	Landscape Design I	3
HLT 1032	Sustainable Landscaping	3
ELECTIVE	Computer Aided Drafting 2D I (CAD 1101) or Sketchup (CAD 1110)	3
		Subtotal: 9

Second Semester

HLT 2030	Landscape Design II	3
INTERNSHIP	Internship (HLT 2080) or Cooperative Education (HLT 2087)	3
		Subtotal: 6

Semester Note: Faculty **recommend students complete their internship** during the summer semester after finishing HLT 2030.

Third Semester

HLT 2032	Landscape Design III	3
		Subtotal: 3

Semester Note: Faculty **recommend students complete their internship** during the summer semester after finishing HLT 2030.

Total Credit Hours: 18
Important Program Notes:

Students may begin this certificate at Larimer Campus, but may only be completed at Westminster Campus where all certificate classes are offered.

Horticulture faculty recommend students without plant identification skills take the HLT 2021, HLT 2022, HLT 2023 and/or HLT 2024 courses.

Additionally, HLT 2036 and HLT 2037 provide critical understanding to Landscape Design and are recommended, but are only offered at Larimer Campus.

LANDSCAPE CONTRACTING TECHNICIAN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Landscape Contracting Technician and enter the workforce. Students explore landscape irrigation, woody plants, woody plant identification, landscape construction, and cost estimation practices. This program prepares students to work in or own a landscape construction company. Students will learn how to build and install retaining walls, decks, brick pavers, paver patios and sprinkler systems. Landscape drainage, lighting, equipment and bidding will also be covered.

First Semester

HLT 1050	Irrigation I	3
HLT 2036	Landscape Construction	4
HLT 2022	Woody Plants: Shrubs & Vines	3
		Subtotal: 10

Second Semester

HLT 2021	Woody Plants: Trees & Conifers	3
HLT 2037	Landscape Bidding & Estimating	2
INTERNSHIP	Internship (HLT 2080) or Cooperative Education (HLT 2087)	3
		Subtotal: 8

Total Credit Hours: 18

LANDSCAPE MAINTENANCE TECHNICIAN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Landscape Maintenance Technician and enter the workforce. Students explore the best landscape maintenance and management practices. This program prepares the student for a career working for landscape maintenance companies or a municipality. Students learn essential landscape management skills such as tree care, pruning, soil management, watering, fertilization, pest management, and sprinkler repair.

First Semester

HLT 1050/51 or 2102/2008	Irrigation I & II (HLT 1050 & 1051) or Plant Health Care (HLT 2102) and Pesticide Safety & Use (HLT 2008)	6
HLT 2023	Annuals, Bulbs, and Grasses	2
		Subtotal: 8

Semester Note: If you complete HLT 2102 this semester, you will need to complete HLT 2008 next semester.

HLT 1050, HLT 1051, and HLT 2102 are only offered in fall semesters. HLT 2008 is only offered in spring semesters. Before selecting which set of courses you wish to take, you may want to consult with a Program Director or consider how these courses apply to your broader academic plans and career goals.

By completing HLT 1050 (Irrigation I) and HLT 1051 (Irrigation II), you can earn the Irrigation Technician (p. 110) certificate.

Second Semester

HLT 2010	Landscape Management	4
HLT 2021 or HLT 2022	Woody Plants: Trees & Conifers (2021) or Woody Plants: Shrubs & Vines (2022)	3
HLT 2080 or HLT 2087	Internship (HLT 2080) or Cooperative Education (HLT 2087)	3
		Subtotal: 10

Total Credit Hours: 18
Important Program Note: You **should complete** HLT 1050 Irrigation I (**fall semester only**, 3 credits) and HLT 1051 Irrigation II (**fall semester only**, 3 credits), **or** HLT 2102 Plant Health Care (**fall semester only**, 4 credits) and HLT 2008 Pesticide Safety and Use (**spring semester only**, 2 credits). By completing HLT 1050 (Irrigation I) and HLT 1051 (Irrigation II), you can earn the Irrigation Technician certificate. Before selecting which set of courses you wish to take, you may want to consult with a Program Director or consider how these courses apply to your broader academic plans and career goals. If you elect to take all four courses, the extra six credits can be used as elective coursework toward the Horticulture and Landscape Technologies AAS degree and/or the Horticulture certificate.

GREENHOUSE AND NURSERY MANAGEMENT CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Greenhouse and Nursery Management and enter the workforce. Students explore all management aspects of the greenhouse and nursery industry. In this program students learn the skills necessary to begin a career including plant identification, propagation and plant health care. Business concepts such as greenhouse operations and management are also covered.

First Semester

ELECTIVE	HLT 2021/2022/2023/2024/2026	2
ELECTIVE	HLT 2021/2022/2023/2024/2026	2
ELECTIVE	Plant Health Care (HLT 2102) or Plant Propagation (HLT 2160)	4
		Subtotal: 8

Semester Note: HLT 2102 and HLT 2160 are offered in fall at the Westminster Campus.

Second Semester

ELECTIVE	HLT 2021/2022/2023/2024/2026	2
INTERNSHIP	Internship (HLT 2080) or Cooperative Education (HLT 2087)	3
HLT 1060	Greenhouse Management	4
		Subtotal: 9

Semester Note: HLT 1060 is offered in the spring semester at the Larimer and Westminster campuses.

Total Credit Hours: 17

IRRIGATION TECHNICIAN CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one or two semester Certificate in Irrigation Technician and enter the workforce. Students explore irrigation components, installation, repair and maintenance with a focus on efficient water use. This certificate prepares students for entry-level careers with basic instruction in landscape irrigation and maintenance.

First Semester		
HLT 1050	Irrigation I	3
HLT 1051	Irrigation II	3
		Subtotal: 6

Total Credit Hours: 6
Important Program Note:

Irrigation I and II are only offered at the Westminster Campus. Contact a Program Director or Pathways Advisor for **more details on the current schedule**.

This certificate is **not financial aid eligible**, but **may be earned as part of other financial-aid-eligible certificates**.

MATHEMATICS ASSOCIATE OF SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students transferring to a four-year university to complete their BS or BA degree in Mathematics. It allows students to complete the first two years of the BS degree at the community college. Students explore calculus and computer/engineering applications. Mathematics is more than the study of counting and measurement it is also the study of shapes and motion. Mathematicians look for patterns and use them to design new theories, new models, and even predictions about nature. This program introduces students to Mathematics and it includes courses that are common to all four-year institutions in Colorado. Career paths in mathematics include finance, engineering, computer science, coding, accounting, statistics, and research. The Associate of Science (AS) degree in Mathematics prepares students to complete the second half of a Bachelor of Science (BS) or a Bachelor of Arts (BA) in Mathematics at a four-year university.

The AS in Mathematics requires you to enter prepared to take Calculus (MAT 2410), Calculus-based Physics (PHY 2111). Any needed prerequisites to be ready for these courses will not count for this degree. For many students, a general AS degree or a general AA degree (p. 55) is a better fit. It allows you to apply college-level courses in College Algebra, Pre-calculus, and Physics. See an advisor to discuss testing out options, review transfer university requirements, and to develop an academic plan that works for you.

First Semester		
MAT 2410	Calculus I: GT-MA1	5
ENG 1021	English Composition I: GT-CO1	3
GT- AH	Logic (PHI 1013) or Any GT-AH	3
ELECTIVE	Intro to Programming (CSC 1019) or Any Approve Elective List Course	3
		Subtotal: 14
Second Semester		
MAT 2420	Calculus II: GT-MA1	5
CSC 1060	Computer Science I: (Language)	4
ENG 1022	English Composition II: GT-CO2	3
GT- AH	Logic (PHI 1013) or Any GT-AH	3
		Subtotal: 15

Semester Note: Per the Statewide Transfer Articulation Agreement (STAA), Colorado State University **requires a different computer science course instead of Computer Science I (CSC 1060)**. You **should seek advising at Colorado State University** for the appropriate computer science course to take.

Third Semester		
MAT 2430 or MAT 2431	Calculus III (2430) or Calculus III w/ Engineering Apps (2431)	4
PHY 2111	Physics: Calculus-Based I w/Lab: GT-SC1	5
GT- SS	Any Social Sciences (GT-SS) Course	3
GT- AH	Logic (PHI 1013) or Any GT-AH	3
		Subtotal: 15
Fourth Semester		
PHY 2112	Physics: Calculus-Based II w/Lab: GT-SC1	5
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
GT- HI1	Any History (GT-HI1) Course	3
ELECTIVE	Any Approved Elective List Course	2
GT- SS	Any Social Sciences (GT-SS) Course	3
		Subtotal: 16

Total Credit Hours: 60
Important Program Notes:

The AS in Mathematics requires you to enter prepared to take Calculus (MAT 2410) and Calculus-based Physics (PHY 2111). Any needed prerequisites to be ready for these courses will not count for this degree. For many students, a general AS degree or a general AA degree (p. 55) is a better fit. It allows you to apply college-level courses in College Algebra, Pre-calculus, and Physics. See an advisor to discuss testing out options, review transfer university requirements, and to develop an academic plan that works for you.

The Mathematics Faculty **recommend you take your math courses in consecutive semesters (without taking a semester off, except possibly summer)**. The math in these courses build

heavily on each other and **taking courses in consecutive semesters increases skill retention.**

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), if Public Speaking (COM 1150) or Interpersonal Communication (COM 1250), Calculus II (MAT 2420), Calculus III (MAT 2430) or Calculus III w/ Engineering Applications (MAT 2431), or Computer Science I (CSC 1060) **are not required for the major at a receiving 4-year institution**, they **will be applied to the Bachelor's degree as elective credit** toward graduation. Please **check with the receiving institution** to determine in which way these courses will be applied.

Per the Statewide Transfer Articulation Agreement (STAA), PHY 2111 and PHY 2112 **are the Natural & Physical Sciences (GT-SC1) required courses.**

If you **take Calculus III w/ Engineering Applications (MAT 2431)**, it **will reduce the 5 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

PHYSICS ASSOCIATE OF SCIENCEMY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

There are **multiple ways** to pursue a **degree in physics**. It is very **important** to **work** with your **Pathways Advisor** to develop the **best academic plan** for where you are **starting** and where you are hoping to **transfer**.

For students who want to complete a **degree in physics** and are **college chemistry** and **calculus ready**, the **AS in Physics** is the **most direct path** to a **Bachelor's degree** in this field. It is recommended that you meet with your **advisor** before selecting a **pathway in physics**.

Program Description
This program is designed for students transferring to a four-year school to complete their BS or BA degree in Physics. It allows them to complete the first two years of the degree prior to transferring. Students explore advanced applied physics and calculus. The laws of physics govern everything in the universe from the tiniest bit of matter to the largest star. Physics is a prerequisite to any in-depth study of the sciences and technologies and it leads to careers in variety of industries. The physics degree program at FRCC provides the necessary background for transfer to a four-year university.

First Semester

MAT 2410	Calculus I: GT-MA1	5
CHE 1111	General College Chemistry I w/Lab: GT-SC1	5
GT- AH	Any Arts & Humanities (GT-AH) Courses	3
ENG 1021	English Composition I: GT-CO1	3
		Subtotal: 16

Second Semester

PHY 2111	Physics: Calculus-Based I w/Lab: GT-SC1	5
MAT 2420	Calculus II: GT-MA1	5
ENG 1022	English Composition II: GT-CO2	3
GT- AH	Any Arts & Humanities (GT-AH) Courses	3
		Subtotal: 16

Third Semester

PHY 2112	Physics: Calculus-Based II w/Lab: GT-SC1	5
MAT 2430 or MAT 2431	Calculus III (2430) or Calculus III w/ Engineering Apps (2431)	4
GEN EDU	CSC 1060 or CHE 1112	4
		Subtotal: 13

Fourth Semester

PHY 2113	Physics III: Calculus-Based Modern	3
MAT 2562	Differential Equations with Linear Algebra	3
GT- AH	Any Arts & Humanities (GT-AH) Courses	3
GT- HI1	HIS 1310/1220/2135/1320/1210/2015 or Any GT-HI1	3
GT- SS	Any Social and Behavior Sciences (GT-SS) Courses	3
		Subtotal: 15

Total Credit Hours: 60
Important Program Notes:

Semester Note: Per the Statewide Transfer Articulation Agreement (STAA), you **may complete ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) OR ENG 1022 (GT-CO2) and gtPathways-approved CO3 course (GT-CO3** (p. 18)**).**

Per the Statewide Transfer Articulation Agreement (STAA), if PHY 2113, MAT 2420, MAT 2430 or MAT 2431, MAT 2562, CHE 1111, or CSC 1060 or CHE 1112 credits **are not required for the major at a receiving 4-year institution**, they **will be applied to the bachelor's degree as elective credits** toward graduation. Please **check with the receiving institution** to determine in which way these courses will be applied.

Per the Statewide Transfer Articulation Agreement (STAA), students planning to transfer to the **University of Colorado Boulder must take CHE 1112 (not CSC 1060)** to fulfill this requirement (Additional Required Courses). Students planning to transfer to the **University of Northern Colorado must take CSC 1060 (not CHE 1112)** to fulfill this requirement (Additional Required Courses). Students planning to transfer to **Fort Lewis College or to the University of Colorado-Colorado Springs must take both CSC 1060 and CHE 1112**. Students planning to transfer to a receiving **institution not specifically listed here, may choose either one of these courses (CHE 1112 or CSC 1060).**

If you take more credits in mathematics than are listed, it **will put you over 60 credits**. The **courses will transfer**, but the **extra credits may not**. That is, the receiving institution **may still require the completion of 60 credits for the major.**

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Social Sciences, Education & Public Service

This Career and Academic Community includes the following programs: Anthropology, Criminal Justice & Public Safety, Early Childhood Teacher Education, Economics, Elementary Teacher Education, Geography, History, Paralegal/Legal Assistant, Political Science, Psychology, Sociology, and Teaching English as a Second Language. To learn more about the program click on the program below.

ANTHROPOLOGY ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree and transfer to a university to complete a BA in Anthropology. Students explore cultural and biological Anthropology. Anthropology is the study of human society, life, and culture. It answers questions about how people lived, what they thought, and how they interacted with their environment. This gives us an understanding of the world today, and how the future world may develop. This program introduces students to the study of Anthropology and includes courses that are common to all Colorado four-year institutions. Careers often require a master's degree. Career paths for Anthropology degree holders include market research, field and medical research, museum management, public health, community studies, cultural studies, and field studies in archaeology. The Associate of Arts (AA) degree in Anthropology prepares students to complete the second half of a Bachelor of Arts (BA) in Anthropology at a four-year university.

First Semester

ENG 1021	English Composition I: GT-CO1	3
ANT 1001	Cultural Anthropology: GT-SS3	3
GT- MA1	Intro to Statistics (MAT 1260)/College Algebra (MAT 1340) or Any GT-MA1	3
GT- HI1	HIS 1110/1120 or Any GT-HI1	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
	Subtotal: 15	

Second Semester

ENG 1022	English Composition II: GT-CO2	3
ANT 1005	Biological Anthropology with Laboratory: GT-SC1	4
REQUIRED	COM 1150/1250/2300	3
GT- SS	ETH 2000, PSY 1002, SOC 1001/2007/2015, or Any GT-SS	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
	Subtotal: 16	

Semester Notes: ANT 1005 is offered at Larimer Campus in fall and spring and Westminster Campus and Online only in spring semester. ANT 1005 is not offered at the Boulder County Campus.

Third Semester

ANT 1003	Introduction to Archaeology: GT-SS3	3
GT- SC1	ENV 1111, GEY 1135, or Any GT-SC1	4
GT- SS	Any Social Science (GT-SS) Course	3
ELECTIVE	Any Approved Elective List Course	3
	Subtotal: 13	

Semester Notes: ANT 1003 is offered at Larimer Campus and Boulder County Campus in fall and spring and Westminster Campus and Online only in fall semester.

Fourth Semester

REQUIRED	Any Anthropology in GT-SS3 Course	3
GT- SC1	ENV 1111, GEY 1135, or Any GT-SC1	4
GT- SS2/3	Any GT-SS2 or GT-SS3 Course	3
ELECTIVE	Any Approved Elective List Course	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
	Subtotal: 16	

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), additional ANT courses beyond the 4 courses identified in the Statewide Transfer Articulation Agreement (ANT 1001, ANT 1003, ANT 1005, or Any 3 credits from ANT Prefix in GT-SS3) **may not count toward the Anthropology major at the receiving 4-year institution.**

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Sciences courses (GTSC1).**

You **may take ANT 1005 and ANT 1003** in either Semester 2 or Semester 3. You **should take the course that is offered at your preferred campus or online** depending on course availability. ANT 1005 is offered at Larimer Campus in Fall and Spring and Westminster Campus and Online only in Spring semester. ANT 1005 is not offered at the Boulder County Campus. ANT 1003 is offered at Larimer Campus and Boulder County Campus in Fall and Spring and Westminster Campus and Online only in Fall semester. Campus offerings vary by semester. You **must take BOTH ANT 1003 and ANT 1005** to successfully complete the AA degree in Anthropology.

If you **take more credits in mathematics and science** than are listed, it **will reduce the 14 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Criminal Justice & Public Safety

CRIMINAL JUSTICE ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a Criminal Justice BA or BS. Criminal Justice, policing and correction systems are explored. Some careers require a bachelor's degree. Studying Criminal Justice gives us a better understanding of the three main parts of the criminal justice system: law enforcement, the judicial system, and corrections. This program focuses closely on criminal behavior, criminal law, and constitutional law. Criminal Justice requires a willingness to be understanding of different cultures. This program introduces students to the study of Criminal Justice and includes courses that are common to all Colorado four-year institutions. Career paths for Criminal Justice degree holders lead to a variety of federal, state, and local criminal justice agencies. These include correctional institutions, juvenile corrections, treatment facilities, law enforcement agencies, courts, private security, and investigation work. The Associate of Arts (AA) degree in Criminal Justice prepares students to complete the second half of a Bachelor of Arts (BA) in Criminal Justice at a four-year university.

First Semester

SOC 1001	Intro to Sociology I: GT-SS3	3
ENG 1021	English Composition I: GT-CO1	3
COM 1150 or COM 1250	Public Speaking (1150) or Interpersonal Communication (1250)	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
CRJ 1010	Intro to Criminal Justice: GT-SS3	3
		Subtotal: 15

Second Semester

GT- HI1	HIS 1220/2015/2145/2110 or Any GT-HI1	3
CRJ 1025	Policing Systems	3
ENG 1022	English Composition II: GT-CO2	3
GT- SC1	Any Science (GT-SC1) Course	4
GT- MA1	MAT 1240/1340/1260 or Any GT-MA1	3
		Subtotal: 1

Third Semester

CRJ 1045	Correctional Process	3
REQUIRED	CRJ Course*	3
GT- SC1/2	Any Science (GT-SC1/2) Course	3
GT- SS	Any Social & Behavioral Science (GT-SS3)	3
REQUIRED	COM, POS, PSY, or SOC Course**	3
		Subtotal: 15

Fourth Semester

REQUIRED	CRJ Course*	3
REQUIRED	COM, POS, PSY, or SOC Course**	3
REQUIRED	COM, POS, PSY, or SOC Course**	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
ELECTIVE	Any Approved Elective List Course	2
		Subtotal: 14

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and gtPathways-approved CO3 course (GT-CO3 (p. 18)).

Per the Statewide Transfer Articulation Agreement, you **must choose two gtPathway Arts & Humanities courses from two different categories** (GT-AH1 (p. 17), GT-AH2 (p. 17), GT-AH3 (p. 18), or GT-AH4 (p. 18)).

*Per the Statewide Transfer Articulation Agreement (STAA), you **must select two** additional required **CRJ courses** to complete the Associate of Arts (AA) degree. The additional required **CRJ courses** are: CRJ 1027, CRJ 1035, CRJ 2005, CRJ 2009, CRJ 2030, CRJ 2031, CRJ 2035, CRJ 2036, CRJ 2057, or CRJ 2068.

Per the Statewide Transfer Articulation Agreement (STAA), you **must select three additional required **ANT, COM, POS, PSY, or SOC courses** to complete the Associate of Arts (AA) degree. The additional required **ANT, COM, POS, PSY, or SOC** courses are: COM 2220, COM 2250, POS 1011, POS 1025, PSY 2770, PSY 2107, PSY 2221, PSY 2552, or SOC 2031. CNG 2058 (Digital Forensics) **can apply to this degree**. However, CNG 1032 (Network Security Fundamentals, 3 credits) **must be taken prior** CNG 2058. CNG 1032 (Network Security Fundamentals) requires CNG 1020 (A+ Certification Preparation, 4 credits) and CNG 1024 (Networking I: Networking +, 3 credits), to be **taken prior to** or **at the same time** as CNG 1032. Taking CNG 1032, CNG 1020, and CNG 1024 **will increase the total credits to 70** to complete this degree.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Science courses (GT -SC1, GT-SC2).** One of these courses **must have the required laboratory (GT-SC1).**

If you **take more credits in mathematics and science** than are listed, it **will reduce the 2 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

CRIMINAL JUSTICE - ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a three semester AAS Degree in Criminal Justice and enter the workforce. Students explore criminal investigation, police and law enforcement academy, law, arrest control, driving, and firearms. The A.A.S. degree in Criminal Justice is intended for those who plan to enter a career in law enforcement with a law enforcement commission. It prepares students currently sponsored or endorsed by a law enforcement agency with approved Colorado Peace Officer Standards and Training (POST) curriculum. FRCC is a Colorado POST-Approved Basic Academy. **Attendance is limited to individuals sponsored or endorsed by a law enforcement agency.** The FRCC Law Enforcement Academy provides POST certification and an education which prepares the cadet to become a member of the law enforcement profession and to meet the needs of agencies in the Northern Colorado region. To enroll in this program, students must have completed, or be currently enrolled in the FRCC Peace Officers Standards and Training certificate program. The Peace Officers Standards and Training certificate program requires employment and sponsorship or endorsement by a participating law enforcement agency.

First Semester

CRJ 1010	Intro to Criminal Justice: GT-SS3	3
ENGLISH	Composition I/II (ENG 1021/22)	3
COM 1150	Public Speaking	3
MATH	Career Math (MAT 1140) or Higher	3
		Subtotal: 12

Second Semester

CRJ 2009	Criminal Investigation I	3
PHI 1012	Ethics: GT-AH3	3
GEN EDU	PSY 1001, SOC 1001, or POS 1011	3
		Subtotal: 9

Third Semester

LEA 1001	Basic Police Academy I	6
LEA 1002	Basic Police Academy II	12
LEA 1003	Basic Law Enforcement Academy III	2
LEA 1004	Basic Law Enforcement Academy IV	1
LEA 1005	Basic Law	8
LEA 1006	Arrest Control Techniques	3
LEA 1007	Law Enforcement Driving	3
LEA 1008	Firearms	3
LEA 1040	Wellness for Law Enforcement	1
		Subtotal: 39

Semester Note: Upon completion of LEA 1001, LEA 1002, LEA 1003, LEA 1004, LEA 1005, LEA 1006, LEA 1007, LEA 1008, and LEA 1040, you **should apply for the Peace Officers Standards Training Certificate** (p. 114)**.**

Total Credit Hours: 60
Important Program Notes:

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

PEACE OFFICERS STANDARDS & TRAINING CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description
To enroll in this program, students must be employed, sponsored, or endorsed by a participating law enforcement agency.
This program is designed for students wanting to complete a one semester Certificate in Peace Officers Standards & Training (POST), be prepared to sit for the Colorado POST certification exam, and enter the workforce. FRCC is a Colorado POST-Approved Basic Academy. Students will explore an academic foundation in criminal justice, police operations, and basic law, as well as skills training in arrest control, driving, and firearms. The curriculum covers all POST required hours as well as additional training in various areas, such as verbal de-escalation and implicit bias. Attendance is limited to individuals sponsored or endorsed by a law enforcement agency.

First Semester

LEA 1001	Basic Police Academy I	6
LEA 1002	Basic Police Academy II	12
LEA 1003	Basic Law Enforcement Academy III	2
LEA 1004	Basic Law Enforcement Academy IV	1
LEA 1005	Basic Law	8
LEA 1006	Arrest Control Techniques	3
LEA 1007	Law Enforcement Driving	3
LEA 1008	Firearms	3
LEA 1040	Wellness for Law Enforcement	1
		Subtotal: 39

Total Credit Hours: 39
Note: Professional Licensure Disclosure

Students enrolling or continuing at Front Range Community College (FRCC) have a right to certain information that the college is required by law to provide. As a student applying for or attending the Law Enforcement Academy, you have the right to know it meets the licensure or certification criteria for Colorado. It is possible that the degree/certificate may count toward licensing in states other than Colorado. If you are planning to seek work outside of Colorado, it is strongly recommended that you contact that state's certifying or licensing entity for guidance before you begin this program. State-by-state information is available on the International Association of Directors of Law Enforcement Standards and Training site. This program meets the applicable state prerequisites for licensure or certification in Colorado as listed below:

Colorado Peace Officer Standards and Training (POST) Board

FRCC has determined the Law Enforcement Academy does NOT meet applicable state prerequisites for licensure or certification for the following states: Alabama, Alaska, Arizona, Arkansas, California, Connecticut, District of Columbia, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New

Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming and U.S. Territories: American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands.

Early Childhood Education

EARLY CHILDHOOD EDUCATION ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Early Childhood Education and enter the workforce. Students explore all facets of early childhood education techniques and strategies, child care, growth and development. This AAS degree provides training for 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. As part of this degree, students will earn three certificates - Early Childhood Assistant Teacher, Early Childhood Teacher, and Early Childhood Director. The program meets or exceeds all Colorado Department of Early Childhood licensing requirements.

First Semester

ECE 1011 or ECE 1011 en español	Introduction to Early Childhood Education (ECE 1011) or Introducción a la Educación Infantil Temprana (ECE 1011 en español)	3
ECE 1031 or ECE 1031 en español	Guidance Strategies for Young Children (ECE 1031) or Estrategias de orientación para niños pequeños (ECE 1031 en español)	3
ECE 2381	ECE Child Growth and Development	3
ENG 1021	English Composition I: GT-CO1	3
PSY 1001	General Psychology I: GT-SS3	3
	Subtotal: 15	

Semester Note: Upon completion of ECE 1011 and ECE 1031, you **should apply** for the **Early Childhood Assistant Teacher Certificate** (p. 117)**.**

Second Semester

ECE 1045	Intro to ECE Techniques	3
ECE 2621	Curriculum Methods/Techniques	3
ECE 2101	Working w/Families & Communities	3
LIT 2055	Children's Literature: GT-AH2	3
MATH	Career Mathematics (MAT 1140) or Higher	3
	Subtotal: 15	

Semester Note: Upon completion of ECE 1011, ECE 1031, ECE 2381, ECE 1045, ECE 2621, and ECE 2101, you **should apply for the Early Childhood Teacher Education Certificate** (p. 117)**.**

Third Semester

ECE 1111	Infant and Toddler Theory and Practice	3
ECE 2051	ECE Nutrition, Health and Safety	3
ECE 2401	Admin of ECE Programs	3
ECE 2411	Admin: Human Relations ECE	3
ECE 1088	Practicum: ECE	4
	Subtotal: 16	

Fourth Semester

ECE 2601	The Exceptional Child	3
ECE 2088	Practicum: Early Childhood Education	4
ECE 2089	Capstone	1
HIS 1210 or HIS 1220	US History to Reconst. (1210) or US History Since Civil War (1220)	3
ELECTIVE	Any Early Childhood Education (ECE) Course	3
	Subtotal: 14	

Semester Note: Upon completion of ECE 1011, ECE 1031, ECE 2381, ECE 1045, ECE 2621, ECE 1111, ECE 2051, ECE 2401, ECE 2411, and ECE 2601, you **should apply for the Early Childhood Director Certificate** (p. 116)**.**

Total Credit Hours: 60
Important Program Notes:

If you are enrolling in ECE 1045, ECE 1125, ECE 1088, and ECE 2088, you **must pass a criminal background check before you are allowed to start your practicum hours with children**. **Contact your home campus ECE Program Director** if you are enrolling in an on-campus section of a practicum course or the FRCC-ECE Online Lead if you are enrolling in an online section of a practicum course for information on how to complete the background check process.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

EARLY CHILDHOOD TEACHER EDUCATION ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA or BS with licensure in Early Childhood Teacher Education. Licensure requires a bachelor's degree and meeting the standards of the Colorado Department of Education. Students explore early childhood education techniques and strategies, child care, growth and development. As part of this degree, students will earn two certificates - Early Childhood Assistant Teacher and Early Childhood Teacher.

First Semester

ECE 1011 or ECE 1011 en español	Introduction to Early Childhood Education (ECE 1011) or Introducción a la Educación Infantil Temprana (ECE 1011 en español)	3
ECE 1031 or ECE 1031 en español	Guidance Strategies for Young Children (ECE 1031) or Estrategias de orientación para niños pequeños (ECE 1031 en español)	3
ECE 2381	ECE Child Growth and Development	3
ENG 1021	English Composition I: GT-CO1	3
PSY 1001	General Psychology I: GT-SS3	3
		Subtotal: 15

Semester Note: Upon completions of ECE 1011 and ECE 1031, you **should apply** for the **Early Childhood Assistant Teacher Certificate** (p. 117)**.**

Second Semester

ECE 1045	Intro to ECE Techniques	3
ECE 2621	Curriculum Methods/Techniques	3
ECE 2101	Working w/Families & Communities	3
GT- AH2	LIT 2055/1015	3
MAT 1240	Math for Liberal Arts: GT-MA1	4
		Subtotal: 16

Semester Note: Upon completion of ECE 1011, ECE 1031, ECE 1045, ECE 2101, and ECE 2621, you **should apply** for the **Early Childhood Teacher Certificate** (p. 117)**.**

Third Semester

ENG 1022	English Composition II: GT-CO2	3
GEO 1005	World Regional Geography: GT-SS2	3
HIS 1210 or HIS 1220	US History to Reconst. (1210) or US History Since Civil War (1220)	3
GT- AH	MUS 1020, ART 1110, or THE 1005	3
SCI 1055	Integrated Science I w/Lab: GT-SC1	4
		Subtotal: 16

Fourth Semester

SCI 1056	Integrated Science II w/Lab: GT-SC1	4
ELECTIVE	Transfer Agreement List Course	3
ELECTIVE	Transfer Agreement List Course	3
ELECTIVE	Transfer Agreement List Course	3
		Subtotal: 13

Total Credit Hours: 60
Important Program Notes:

Certain classes in this degree are only offered through an online format. Speak to your Pathways Advisor or home campus ECE Program Director for additional information.

Per the Statewide Transfer Agreement, you **must pass with a C- or higher BOTH SCI 1055 and SCI 1056 to satisfy the GT Pathways science requirement.**

Credits for additional required courses may not be required for the major at a receiving 4-year institution. If not required, they will be **applied to the Bachelor's degree as elective credit toward graduation.** Please **check with the receiving institution to determine in which way these courses will be applied.**

Electives vary by transfer institution per the Statewide Transfer Articulation Agreement. Although these courses vary by institution, they must be selected from the following: ECE 1111, ECE 1125, ECE 2051, ECE 2401, ECE 2411, ECE 2601, MAT 1260, PSY 2440, ECE 2651, COM 1150, PSY 1002, and ECE 2641.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Early Childhood Education Certificates

EARLY CHILDHOOD DIRECTOR CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Early Childhood Director and enter the workforce. It prepares students for administrative and leadership roles in early childhood education. Students completing this certificate expand on foundational early childhood education knowledge, skills, and dispositions to develop administrative skills, ethical decision making, risk management, and human relations with staff, family, and community. This certificate meets coursework requirements for "Directors" as outlined in the Colorado Rules Regulating Child Care Centers. Experience hours in early childhood education settings are also required to meet state requirements. As part of this certificate, students will also earn the Early Childhood Assistant Teacher Certificate.

First Semester

ECE 1011 or ECE 1011 en español	Introduction to Early Childhood Education (ECE 1011) or Introducción a la Educación Infantil Temprana (ECE 1011 en español)	3
ECE 1031 or ECE 1031 en español	Guidance Strategies for Young Children (ECE 1031) or Estrategias de orientación para niños pequeños (ECE 1031 en español)	3
ECE 2381	ECE Child Growth and Development	3
ECE 1045	Intro to ECE Techniques	3
ECE 2621	Curriculum Methods/Techniques	3
		Subtotal: 15

Semester Note: Upon completion of ECE 1011 and ECE 1031, you **should apply** for the **Early Childhood Assistant Teacher Certificate** (p. 117)**.**

Second Semester

ECE 1111	Infant and Toddler Theory and Practice	3
ECE 2051	ECE Nutrition, Health and Safety	3
ECE 2401	Admin of ECE Programs	3
ECE 2411	Admin: Human Relations ECE	3
ECE 2601	The Exceptional Child	3
		Subtotal: 15

Total Credit Hours: 30
Important Program Notes:

This certificate can be completed entirely online or through a mixture of online and on-campus classes.

EARLY CHILDHOOD EDUCATION FOR PARAEDUCATORS CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one-year (two semester) Certificate in Early Childhood Education for Paraeducators and enter the workforce. Students explore early childhood education techniques and strategies, family dynamics, curriculum development, and child growth and development. This certificate program prepares the student for a career as a preschool paraeducator, or "para" to support teachers in inclusive classrooms. Students receive a 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. As part of this certificate, students will also earn the Early Childhood Assistant Teacher Certificate.

First Semester

ECE 1011 or ECE 1011 en español	Introduction to Early Childhood Education (ECE 1011) or Introducción a la Educación Infantil Temprana (ECE 1011 en español)	3
ECE 1031 or ECE 1031 en español	Guidance Strategies for Young Children (ECE 1031) or Estrategias de orientación para niños pequeños (ECE 1031 en español)	3
ECE 2381	ECE Child Growth and Development	3
		Subtotal: 9

Semester Note: Upon completion of ECE 1011, and ECE 1031, you **should apply** for the **Early Childhood Assistant Teacher Certificate** (p. 117)**.**

Second Semester

ECE 1045	Intro to ECE Techniques	3
ECE 1571	Family Dynamics	1
ECE 1611	The Team Process	1
ECE 2621	Curriculum Methods/Techniques	3
ECE 2601	The Exceptional Child	3
		Subtotal: 11

Total Credit Hours: 20
Important Program Notes:

This certificate can be completed entirely online or through a mixture of online and on-campus classes.

If starting this certificate in the **spring**, **complete ECE 1571 and ECE 1611** in the **first semester and ECE 2381** in the **second semester**.

EARLY CHILDHOOD TEACHER CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Early Childhood Teacher and enter the workforce. It prepares professional educators of young children (birth to age eight) with the foundational knowledge, skills, and dispositions in developmentally appropriate practice, child development, family and community relations, early childhood curriculum and assessment, and professional ethics and equity. Coursework meets or exceeds requirements for "Early Childhood Teacher (ECT)" as outlined in the Colorado Rules Regulating Child Care Centers. Experience hours in early childhood education settings are also required to meet state requirements. As part of this certificate, students will also earn the Early Childhood Assistant Teacher Certificate.

First Semester

ECE 1011 or ECE 1011 en español	Introduction to Early Childhood Education (ECE 1011) or Introducción a la Educación Infantil Temprana (ECE 1011 en español)	3
ECE 1031 or ECE 1031 en español	Guidance Strategies for Young Children (ECE 1031) or Estrategias de orientación para niños pequeños (ECE 1031 en español)	3
ECE 2381	ECE Child Growth and Development	3
ECE 1045	Intro to ECE Techniques	3
ECE 2621	Curriculum Methods/Techniques	3
ECE 2101	Working w/Families & Communities	3
		Subtotal: 18

Semester Note: Upon completion of ECE 1011 and ECE 1031, you **should apply** for the **Early Childhood Assistant Teacher Certificate** (p. 117).

Total Credit Hours: 18
Important Program Notes:

Colorado Department of Early Childhood

EARLY CHILDHOOD ASSISTANT TEACHER CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a one semester Certificate in Early Childhood Assistant Teacher and enter the workforce. It provides an introduction to early childhood education as a profession. Coursework meets the requirements for "Early Childhood Assistant Teacher" as outlined in the Colorado Rules Regulating Child Care Centers. This certificate also meets the coursework requirements for "Early Childhood Teacher" for those individuals with 3,185 hours of

verifiable satisfactory work experience as outlined in the Colorado Rules Regulating Child Care Center.

First Semester

ECE 1011 or ECE 1011 en español	Introduction to Early Childhood Education (ECE 1011) or Introducción a la Educación Infantil Temprana (ECE 1011 en español)	3
ECE 1031 or ECE 1031 en español	Guidance Strategies for Young Children (ECE 1031) or Estrategias de orientación para niños pequeños (ECE 1031 en español)	3
		Subtotal: 6

Total Credit Hours: 6
Important Program Notes:

Many positions in Colorado early childhood programs **require employees to meet, at minimum, the Colorado Department of Early Childhood requirements for Early Childhood Teacher (ECT)**. ECT and Director qualified requirements include a combination of verifiable experience and post-secondary education. This certificate is designed for students who already have verifiable experience in early childhood education or a bachelor's degree in a non-education discipline. This certificate **may be earned by students who do not meet the aforementioned criteria with the understanding that it might not qualify them to work in the field.** Please **contact the Colorado Department of Early Childhood** to determine which requirements you need.

Colorado Department of Early Childhood

ECONOMICS ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in Economics. Economic trends and effects of political and social change are explored. Careers often require a master's degree. The Associate of Arts Degree in Economics prepares students to transfer as a junior to a four-year Colorado institution. A BS degree in Economics prepares students for advanced degrees, teaching careers, or employment. Economic analysis skills are needed in many careers. Students will be prepared to work in banking, finance, insurance, investment, and the corporate world.

First Semester

ENG 1021	English Composition I: GT-CO1	3
ELECTIVE	ECO 1001 or Any Approved Elective List Course	3
GT- SC1	Any Science (GT-SC1) Course	4
GT- AH	Any Arts & Humanities (GT-AH) Course	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 16

Second Semester

ELECTIVE	Any Approved Elective List Course	3
ENG 1022	English Composition II: GT-CO2	3
MAT 1260	Intro to Statistics: GT-MA1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
		Subtotal: 15

Third Semester

GT- HI1	Any History (GT-HI1) Course	3
ELECTIVE	Any Approved Elective List Course	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	2
		Subtotal: 14

Fourth Semester

MAT 2410	Calculus I: GT-MA1	5
GT- AH	Any Arts & Humanities (GT-AH) Course	3
ELECTIVE	Any Approved Elective List Course	3
GT- SC1/2	Any Science (GT-SC1/2) Course	4
		Subtotal: 15

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), ECO 2001 and ECO 2002 **are required Social & Behavioral Sciences (GT-SS) courses.**

Per the Statewide Transfer Articulation Agreement (STAA), you **must take (8 credits) two gtPathways Natural & Physical Sciences courses (GTSC1, GT-SC2);** one **must be with laboratory (GT-SC1).**

If you **take more credits in mathematics and science** than are listed, it **will reduce the 20 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

ELEMENTARY TEACHER EDUCATION ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA with licensure in Elementary Teacher Education. Elementary Teacher careers require a bachelor's degree. The Associate of Arts degree with an emphasis in Elementary* Education prepares students to transfer as a junior to a four-year institution in Colorado in order to become an elementary teacher. Students interested in majoring in education need to identify the four-year college/university to which they plan to transfer. Each individual institution requires different curriculum electives for graduation. *There are no current statewide articulation agreements in

secondary or K-12 education, but students can still effectively pursue these options.

First Semester

EDU 2211	Introduction to Education	3
PSY 2441	Child Development: GT-SS3	3
MAT 1220	Integrated Mathematics I: GT-MA1	3
GEO 1005 or GEO 1006	World Regional Geography (GEO 1005) or Human Geography (GEO 1006)	3
ENG 1021	English Composition I: GT-CO1	3
	Subtotal: 15	

Semester Note: Some educator preparation programs **require a B- in ENG 1021 as an admission requirement**. However, a C- or better **meets the general education GT-CO1 requirement.**

Second Semester

EDU 2341	Multicultural Education	3
MAT 1230	Integrated Mathematics II: GT-MA1	3
ENG 1022	English Composition II: GT-CO2	3
HIS 1210 OR HIS 1220	U.S. History to Reconstruction (HIS 1210) or U.S. History Since the Civil War (HIS 1220)	3
LIT 2055	Children's Literature: GT-AH2	3
	Subtotal: 15	

Third Semester

PSC 1011	American Government: GT-SS1	3
SCI 1055	Integrated Science I w/Lab: GT-SC1	4
ART 1110 or MUS 1020 or THE 1005 or DAN 1025	Art Appreciation (ART 1110) or Music Appreciation (MUS 1020) or Theatre Appreciation (THE 1005) or Dance Appreciation (DAN 1025)	3
GT- AH2	Any GT-AH2 Course	3
ELECTIVE	Transfer Agreement List Course	3
	Subtotal: 16	

Fourth Semester

SCI 1056	Integrated Science II w/Lab: GT-SC1	4
EDU 2611	Teaching, Learning and Technology	3
ELECTIVE	Transfer Agreement List Course	3
ELECTIVE	Transfer Agreement List Course	3
EDU 2088 or ELECTIVE	Practicum II (EDU 2088) or Other One-credit Field Experience Course	1
	Subtotal: 14	

Total Credit Hours: 60
Important Program Notes:

Completion of Integrated Mathematics I (MAT 1220) and Integrated Mathematics II (MAT 1230) with a C- or higher **will satisfy the GT Pathways math requirement at some institutions but not all.** At the receiving institution's discretion, students **may be asked to complete a GT-MA1 approved course.**

This degree requires 9 credits of electives which vary per university. Please work with your Pathways Advisor to review the Transfer Articulation Agreement for more information related to all programs and participating institutions.

Credits for additional required courses **may not be required** for the major at a receiving 4-year institution. If not required, they **will be applied to the Bachelor's degree as elective credit toward graduation.** Please **check with the receiving institution** to determine in which way these courses will be applied.

Semester Four elective credits may vary depending on prior semester completion.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

GEOGRAPHY ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in Geography. Students learn to describe and analyze physical and cultural landscape. Students will explore the earth's surface features and climate, how humans are distributed and the ways in which humans interact with their environment. The program also delves into all aspects of the physical and cultural landscape. This program is designed for students wanting to complete the first two years of a bachelor's degree and transfer to a university to complete a BA in Geography. Careers often require a bachelor's degree.

First Semester

ENG 1021	English Composition I: GT-CO1	3
GT- MA1	MAT 1340/1240 or Any GT-MA1	3
GEO 1006	Human Geography: GT-SS2	3
GEO 1011	Physical Geography: Landforms w/Lab: GT-SC1	4
ELECTIVE	Any Approved Elective List Course	3
	Subtotal: 16	

Semester Notes: GEO 1011 is offered at Larimer Campus in fall and spring semesters and Westminster Campus in fall semester only. Online offerings are available every semester.

Second Semester

ENG 1022	English Composition II: GT-CO2	3
GEO 1012	Phys Geo: Weather, Climate, Eco w/Lab: GT-SC1	4
GT- HI1	HIS 1320/1120 or Any GT-HI1	3
GT- SS	POS 2005, ECO 2001/2045, or Any GT-SS 1 or 3	3
ELECTIVE	Any Approved Elective List Course	3
	Subtotal: 16	

Semester Notes: GEO 1012 is offered at Larimer Campus in fall and spring semesters and Westminster Campus in spring semester only. Online offerings are available every semester.

Third Semester

GEO 1005	World Regional Geography: GT-SS2	3
GT- SC1	Any Sciences (GT-SC1) Course	4
GT- SC1	Any Sciences (GT-SC1) Course	4
GT- SS	POS 2005, ECO 2001/2045, or Any GT-SS 1 or 3	3
	Subtotal: 14	

Semester Notes: Per the Statewide Transfer Articulation Agreement (STAA), two gtPathway natural & Physical Sciences

courses (GT-SC1 only). **NO** GEO-prefix science courses. GEY 1111 **is not recommended**.

Fourth Semester

GT- AH	Any Arts & Humanities (GT-AH) Course	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	2
		Subtotal: 14

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) OR ENG 1022 (GT-CO2) and gtPathways-approved CO3 course (GT-CO3** (p. 18)**).**

Per the Statewide Transfer Articulation Agreement (STAA), if GEO 1011, GEO 1012, GEO 1005, and GEO 1006 courses **are not required for the major at a receiving 4-year institution**, they **will be applied to the Bachelor's degree as elective credits toward graduation.** Please **check with the receiving institution** to determine in which way these courses will be applied.

Per the Statewide Transfer Articulation Agreement (STAA), for the 14 elective credits, a maximum of 6 credits **may be in GEO or GIS prefix**.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Sciences courses (GTSC1 only). PLEASE NOTE:** NO GEO-prefix science courses. GEY 1111 **is not recommended.** For Adams State, you **must take BIO 1111 and CHE 1011.**

You **may take GEO 1011 and GEO 1012** in either Semester 1 or Semester 2. You **should take the course that is offered at your preferred campus or online** depending on course availability. GEO 1011 is offered at Larimer Campus in fall and spring and Westminster Campus only in fall semesters. GEO 1012 is offered at Larimer Campus in fall and spring and Westminster Campus only in spring semester. GEO 1011 and GEO 1012 are available online every semester. Campus offerings vary by semester. You **must take BOTH GEO 1011 and GEO 1012** to successfully complete the AA degree in Geography.

If you take more credits in mathematics and/or science than are listed, it **will reduce the 14 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

HISTORY ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in History. Students analyze history from economic and political perspectives. Careers often require a bachelor's degree. History is the study of the past in order to help us understand the present. Studying History is much more than learning about people, dates, and events - students also learn important skills that are valuable in many careers. These include strong research and writing skills, strong communication skills, and the ability to use digital collections, analyze source material, and present evidence very clearly. This program introduces students to History and it includes courses that are common to all four-year institutions in Colorado. Career paths for History degree holders include public service, law, business, library management, business, marketing, media, and many more. History degree holders are found in many professions around the world. The Associate of Arts (AA) degree in History prepares students to complete the second half of a Bachelor of Arts (BA) in History at a four-year university.

First Semester

ENG 1021	English Composition I: GT-CO1	3
GT- MA1	Math for Liberal Arts (MAT 1240) or Any GT-MA1	3
GT- SS	Any Social Sciences (GT-SS3) Course	3
HIS 1210	U.S. History to Reconst: GT-HI1	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
		Subtotal: 15

Second Semester

ENG 1022	English Composition II: GT-CO2	3
ELECTIVE	Any Approved Elective List Course	3
GT- SC1	Any Science (GT-SC1) Course	4
GT- SS	Any Social Sciences (GT-SS3) Course	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3
		Subtotal: 16

Third Semester

HIS 1220	U.S. History Since Civil War: GT-HI1	3
GT- HI1	Western Civ: Antiquity-1650 (HIS 1310) or The World: Antiquity-1500 (HIS 1110)	3
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
GT- SC1/2	Any Science (GT-SC1/2) Course	3
ELECTIVE	Any Approved Elective List Course	3
		Subtotal: 15

Fourth Semester

GT- AH	Any Arts & Humanities (GT-AH) Course	3
REQUIRED	Western Civ: 1650-Present (HIS 1320) or The World: 1500-Present (HIS 1120)	3
GT- HI1	Any History (GT-HI1) Course	3
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	2
		Subtotal: 14

Semester Notes: Per the Statewide Transfer Articulation Agreement (STAA), Western Civ. Antiquity-1650 (HIS 1310) or The World: Antiquity-1500 (HIS 1110) **are the History (GT-HI1) required courses.**

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) OR ENG 1022 (GT-CO2) and gtPathways-approved CO3 course (GT-CO3** (p. 18)**).**

Per the Statewide Transfer Articulation Agreement (STAA), if these credits **are *not* required for the *major* at a receiving 4-year institution,** they **will be applied to the bachelor's degree as *elective credit*** toward graduation. Please **check with the receiving institution** to determine in which way these courses will be applied.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Sciences courses (GT-SC1, GT-SC2);** one course **must be with required laboratory.**

Per the Statewide Transfer Articulation Agreement (STAA), students planning to transfer to the University of Colorado Boulder **must take either Western Civilization: Antiquity-1650 (HIS 1310) or Western Civilization: 1650-Present (HIS 1320)** to fulfill this requirement (either the History requirement or Additional Required Courses requirement).

Per the Statewide Transfer Articulation Agreement (STAA), students planning to transfer to Colorado State University-Fort Collins **are advised to complete at least two semesters of one college-level foreign language.**

If you take Math for Liberal Arts (MAT 1240) and/or more credits in science than are listed, it **will reduce the 11 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Paralegal

PARALEGAL/LEGAL ASSISTANT ASSOCIATE OF APPLIED SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description

This program is designed for students wanting to complete a two-year AAS Degree in Paralegal and enter the workforce. Students explore torts, contracts, ethics, civil litigation, legal research and e-discovery processes. This AAS degree prepares students to work under the supervision of an attorney preparing legal documents, researching and compiling information, and communicating with clients. Students receive training for careers in a variety of legal areas including contracts and property law, legal ethics, research, and writing. Students will choose electives in fields such as family law, administrative law, evidence, criminal law, probate and estates, employment law, and intellectual property law. They will gain practical hands-on experience in a local work setting to see firsthand what it is like to be a paralegal.

First Semester

ENG 1021	English Composition I: GT-CO1	3
PSC 1011	American Government: GT-SS1	3
COM 1150 or COM 1250 or COM 2300	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250) or Intercultural Communication (COM 2300)	3
MATH	Career Mathematics (MAT 1140) or higher	3
PAR 1115	Introduction to Law	3
		Subtotal: 15

Second Semester

ENG 1022	English Composition II: GT-CO2	3
PAR 1127	Legal Ethics	3
PAR 1116	Torts	3
PAR 1125	Property Law	3
PAR 2211	Legal Research	3
		Subtotal: 15

Semester Note: Upon completion of ENG 1021, PAR 1115, PAR 1127, and any 6 credits of elective (select one from PAR 1116, PAR 1118, PAR 1125, or PAR 2206), you **should apply for the Foundations of Paralegal/Legal Assistant Certificate** (p. 122)**.**

Third Semester

PAR 2201	Civil Litigation	3
PAR 2219	E-Discovery & Litigation Technology	3
PAR 2212	Legal Writing	3
PAR 2089 or PAR 2080 or PAR 2087	Capstone (PAR 2089) or Internship (PAR 2080) or Cooperative Education (PAR 2087)	3
PAR 1118	Contracts	3
		Subtotal: 15

Semester Note: Upon completion of ENG 1021, PAR 1115, PAR 2217, PAR 2201, PAR 2211, PAR 2212, PAR 2219, a capstone course (select one from PAR 2089, PAR 2080, PAR 2087), and any 6 credits of elective (select one from PAR 1116, PAR 1118, PAR 1125, or PAR 2206), you **should apply for the Paralegal/Legal Assistant Certificate** (p. 121)**.**

Fourth Semester

PAR 2206	Business Organizations	3
ELECTIVE	Paralegal Elective Course	3
ELECTIVE	Paralegal Elective Course	3
ELECTIVE	Paralegal Elective Course	3
GEN EDU	Any Approved Elective List Course	3
		Subtotal: 15

Total Credit Hours: 60

Important Program Notes:

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

PARALEGAL/LEGAL ASSISTANT CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Paralegal/Legal Assistant and enter the workforce. Students explore legal ethics, civil litigation, legal research and writing, and e-discovery and litigation technology. This certificate program prepares students for an entry-level career as a legal assistant in a law firm, corporate or government agency setting. This program allows for technical training in the paralegal field and to work effectively with computers and legal research.

First Semester

ENG 1021	English Composition I: GT-CO1	3
PAR 1115	Introduction to Law	3
PAR 1127	Legal Ethics	3
ELECTIVE	Any Paralegal/Legal Assistant Certificate Elective*	3
ELECTIVE	Any Paralegal/Legal Assistant Certificate Elective*	3

Subtotal: 15

Second Semester

PAR 2201	Civil Litigation	3
PAR 2211	Legal Research	3
PAR 2212	Legal Writing	3
PAR 2219	E-Discovery & Litigation Technology	3
PAR 2089 or PAR 2080 or PAR 2087	Capstone (PAR 2089) or Internship (PAR 2080) or Cooperative Education (PAR 2087)	3

Subtotal: 15

Total Credit Hours: 30
Important Program Notes:

***Paralegal/Legal Assistant certificate elective courses:** PAR 1116, PAR 1117, PAR 1118, PAR 1125, PAR 2202, or PAR 2206.

Students **may apply English Composition II (ENG 1022) toward the English Composition I (ENG 1021) requirement.** Students seeking the **Paralegal Assistant AAS degree MUST complete BOTH ENG 1021 AND ENG 1022 requirements.**

FOUNDATIONS OF PARALEGAL: FAMILY LAW CERTIFICATE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a two semester Foundations of Paralegal Assistant Certificate and enter the workforce. Students explore the skills and technology required to work in a legal environment. This certificate program will also help students prepare to be a Licensed Legal Paraprofessional in Family Law in Colorado.

First Semester

ENG 1021	English Composition I: GT-CO1	3
PAR 1115	Introduction to Law	3
PAR 1127	Legal Ethics	3

Subtotal: 9

Second Semester

PAR 1117	Family Law	3
PAR 2201	Civil Litigation	3
PAR 2202	Evidence	3
PAR 2219	E-Discovery & Litigation Technology	3

Subtotal: 12

Total Credit Hours: 21
Important Program Notes:

Students **may apply English Composition II (ENG 1022) toward the English Composition I (ENG 1021) requirement.** Students **seeking the Paralegal Assistant AAS degree MUST complete BOTH ENG 1021 AND ENG 1022 requirements.**

POLITICAL SCIENCE ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor**.

Program Description
This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in Political Science. Students explore governmental structure and processes. Careers often require a BA degree or higher. Political Science is the study of the political process, and its students understand the difference between an opinion and an argument. Political science graduates have a passion for political life not only locally, but also globally. Students will discover the origin, development, and operation of political systems and public policy. This program introduces students to Political Science and it includes courses that are common to all four-year institutions in Colorado. Career paths for Political Science degree holders include much more than running for political office. They also include public service, law, international relations, business, political campaigns, and working for charitable organizations. The Associate of Arts (AA) degree in Political Science prepares students to complete the second half of a Bachelor of Arts (BA) in Political Science at a four-year university.

First Semester

PSC 2020	Intro to Political Science: GT-SS1	3
ENG 1021	English Composition I: GT-CO1	3
ECO 2002	Principles of Microeconomics: GT-SS1	3
GT- HI1	HIS 1220/2145 or Any GT-HI1	3
GT- AH	PHI 1011/1012 or Any GT-AH	3

Subtotal: 15

Second Semester

PSC 1011	American Government: GT-SS1	3
ENG 1022	English Composition II: GT-CO2	3
ECO 2001	Principles of Macroeconomics: GT-SS1	3
GT- MA1	MAT 1260/1340 or Any GT-MA1	3
ELECTIVE	HIS 2015 or Any Approved Elective List Course	3

Subtotal: 15

Third Semester

PSC 2025	Comparative Government: GT-SS1	3
GT- SC1	ENV 1111, GEO 1011/1012, or Any GT-	4

	SC1	
GT- AH	LIT 1015 or Any GT-AH	3
ELECTIVE	SOC 1001 or Any Approved Elective List Course	3
ELECTIVE	PSY 1002 or Any Approved Elective List Course	3

Subtotal: 16

Semester Notes: POS 2025 is offered at Larimer Campus in the fall semester and Westminster Campus in spring semester.

Fourth Semester

PSC 2005	International Relations: GT-SS1	3
GT- SC1	ENV 1111, GEO 1011/1012, or Any GT-SC1	4
ELECTVE	COM 1150 or Any Approved Elective List Course	3
ELECTIVE	GEO 1005/1006 or Any Approved Elective List Course	3
ELECTIVE	PSY 2221 or Any Approved Elective List Course	1

Subtotal: 14

Semester Notes: POS 2005 is offered at Larimer Campus in spring semester and Westminster Campus in fall semester.

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) OR ENG 1022 (GT-CO2) and gtPathways-approved CO3 course (GT-CO3** (p. 18)**).**

Per the Statewide Transfer Articulation Agreement (STAA), ECO 2001 and ECO 2002 **are required Social & Behavioral Sciences (GT-SS) courses.**

Per the Statewide Transfer Articulation Agreement (STAA), if POS 2020, POS 1011, POS 2025, and/or POS 2025 **are not required for the major** at a receiving 4-year institution, they **will be applied to the Bachelor's degree as elective** credit toward graduation. Please **check with the receiving institution** to determine in which way these courses will be applied.

Per the Statewide Transfer Articulation Agreement (STAA), you must take two gtPathways Natural & Physical Sciences courses (GT-SC1).

Per the Statewide Transfer Articulation Agreement (STAA), additional Political Science (POS) courses beyond the 4 courses (12 credit hours) identified above **may not count toward the Political Science major** at the receiving 4-year institution. **See explanation in Statewide Transfer Articulation Agreement (STAA)** under the Limitation section.

You **may take POS 2005 and POS 2025** in either Semester 3 or Semester 4. You **should take the course that is offered at your preferred campus or online** depending on course availability. POS 2025 is offered at Larimer Campus in the fall semester and Westminster Campus in spring semester. POS 2005 is offered at Larimer Campus in spring semester and Westminster Campus in fall semester. Campus offerings vary by semester. You **must take BOTH POS 2005 and POS 2025** to successfully complete the AA degree in Political Science.

If you take MAT 1240 and/or more credits in mathematics or science than are listed, it **will reduce the 16 credits of electives needed.**

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

Psychology

PSYCHOLOGY ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor.**

Program Description

This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in Psychology. Human behavior, how the mind works and mental illness are explored. Psychology is the study of the mind and of behavior. It studies both individuals and groups of people, and it often involves case studies. Psychologists try to understand how mental functions affect individual and social behavior. They also explore emotion, motivation, personality, and relationships. Careers often require a BA degree or higher. Careers include school and private counseling, psychiatrist, psychologist, and treatment for youth and adults. This program introduces students to Psychology and it includes courses that are common to all four-year institutions in Colorado. The Associate of Arts (AA) degree in Psychology prepares students to complete the second half of a Bachelor of Science (BA) in Psychology at a four-year university.

This MAP is appropriate for transfer to Colorado public institutions with the exception of **Colorado State University – Fort Collins**. Students intending to complete an Associate of Science degree in Psychology and transfer to University of Colorado – Denver should refer to the MAP for the Associate of Science degree in Psychology (p. 124). Students intending to transfer to **Colorado State University – Fort Collins** should **contact an advisor**.

First Semester

PSY 1001	General Psychology I: GT-SS3	3
ENG 1021	English Composition I: GT-CO1	3
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
GT- HI1	HIS 2105/2145/2200/2015 or Any GT-HI1	3
GT- AH	Any Arts & Humanities (GT-AH) Course	3

Subtotal: 15

Second Semester

PSY 1002	General Psychology II: GT-SS3	3
ENG 1022	English Composition II: GT-CO2	3
BIO GT-SC1	BIO 1005/1111 or Any Biology w/Lab GT-SC1	4

GT- MA1	MAT 1260/1240/1340 or Any GT-MA1	3
ELECTIVE	HWE 1061 or Any Approved Elective List Course	2
		Subtotal: 15
Third Semester		
REQUIRED	PSY 2107/2221/2440/2441	3
GT- SC1	BIO 2101 or Any Science (GT-SC1) Course	4
ELECTIVE	Any Approved Elective List Course	3
GT- AH	PHI 1011/1012 or Any GT-AH	3
GT- SS	Any Social Sciences (GT-SS) Course	3
		Subtotal: 16
Fourth Semester		
REQUIRED	PSY 2107/2221/2440/2441	3
REQUIRED	PSY 2107/2221/2440/2441	3
GT- SS	Any Social Sciences (GT-SS) Course	3
ELECTIVE	Any Approved Elective List Course	2
GT- AH	Any Arts and Humanities (GT-AH) Course	3
		Subtotal: 14

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), you **must take three gt-Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)**. **No more than two (2) courses from any one category.**

Per the Statewide Transfer Articulation Agreement (STAA), credits for additional required courses (PSY 1001, PSY 1002, COM 1150, COM 1250, or three gtPathways Psychology courses (GT-SS3) **may not be required for the major at a receiving 4-year institution**. If not required, they **will be applied to the Bachelor's degree as elective credit toward graduation.** Please **check with the receiving institution** to determine in which way these courses will be applied.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take one gtPathways Biology course (Psychology faculty recommend BIO 1005 or BIO 1111) from GT-SC1 (course with lab)** and **one gtPathways (GT-SC1) course of your choosing.**

If you **take more credits in mathematics and science** than are listed, it **will reduce the 8 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

PSYCHOLOGY ASSOCIATE OF SCIENCE

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor.**

Program Description
This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BS in Psychology. Human behavior, how the mind works and mental illness are explored. Psychology is the study of the mind and of behavior. It studies both individuals and groups of people, and it often involves case studies. Psychologists try to understand how mental functions affect individual and social behavior. They also explore emotion, motivation, personality, and relationships. This program introduces students to Psychology and it includes courses that are common to all four-year institutions in Colorado. Careers often require a BS degree or higher. Career paths for Psychology BS degree holders include working with medical doctors, psychologists, brain researchers, and biologists. The Associate of Science (AS) degree in Psychology prepares students to complete the second half of a Bachelor of Science (BS) in Psychology at a four-year university. Bachelor of Science degrees in Psychology have added skills in math, sciences, and research.

If students are planning to transfer to University of Colorado-Denver and pursue a B.S. in Psychology, they should use this MAP. If they are intending to transfer to Colorado State University-Ft. Collins (CSU) in Psychology, they should follow the Associate of Arts with No Designation and complete the following courses: PSY 200 (Research Methodology) and PSY 258 (Introduction to Neuropsychology) to satisfy required prerequisites for CSU's upper division psychology courses. Students should ask their Pathways Advisor for details about additional required coursework. If they are intending to transfer to Colorado State University – Pueblo, they should see their Pathways Advisor. If they are intending to transfer to other Colorado Public Universities to pursue a B.A. in Psychology, they should view the MAP for an A.A. in Psychology (p. 123).

First Semester		
ENG 1021	English Composition I: GT-CO1	3
PSY 1001	General Psychology I: GT-SS3	3
ELECTIVE	Any Approved Elective List Course	3
BIO 1111	General College Biology I w/Lab: GT-SC1	5
		Subtotal: 14

Semester Notes: If you are attending University of Colorado-Denver, Approved Elective List courses **must be non-psychology courses**.

Second Semester		
PSY 1002	General Psychology II: GT-SS3	3
GT- HI1	HIS 1220/1320/2005/2015/2145/2200 or Any GT-HI1	3
ENG 1022	English Composition II: GT-CO2	3
PHI 1011 or PHI 1012	Introduction to Philosophy (PHI 1011) or Ethics (PHI 1012)	3
BIO 1112	General College Biology II w/Lab: GT-SC1	5
		Subtotal: 17

Semester Notes: If you are planning to attend **University of Colorado-Denver**, you **must take BIO 1111, BIO 1112, CHE 1111, and CHE 1112** and 3 additional credits from the Approved Elective List, which **must be non-psychology courses** to align with the Statewide Transfer Articulation Agreement. If you are planning to attend **Colorado State University**, you **must take BIO**

1111 and CHE 1111 and BIO 1112 and/or CHE 1112. If you do not take both BIO 1112 and CHE 1112, 5 elective credits **must be math or science courses from the Approved Elective List** (p. 16) and 3 additional credits from the Approved Elective List.

Third Semester

GT- SS	PSY 2107/2440 or any GT-SS Course	3
GT- AH	PHI 1012, HUM 1023, LIT 1015/2012, or Any GT-AH	3
MAT 1340	College Algebra: GT-MA1	4
CHE 1111	General College Chemistry I w/Lab: GT-SC1	5
		Subtotal: 15

Fourth Semester

GT- SS	PSY 2107/2440 or any GT-SS Course	3
CHE 1112	General College Chemistry II w/Lab: GT-SC1	5
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
GT- AH	PHI 1012, HUM 1023, LIT 1015/2012, or Any GT-AH	3
		Subtotal: 14

Semester Notes: If you are planning to attend University of Colorado-Denver, you **must take BIO 1111, BIO 1112, CHE 1111, and CHE 1112** and 3 additional credits from the Approved Elective List, which **must be non-psychology courses** to align with the Statewide Transfer Articulation Agreement. If you are planning to attend Colorado State University, you **must take BIO 1111 and CHE 1111 and BIO 1112 and/or CHE 1112.** If you do not take both BIO 1112 and CHE 1112, 5 elective credits **must be math or science courses from the Approved Elective List** (p. 16) and 3 additional credits from the Approved Elective List.

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3).

Per the Statewide Transfer Articulation Agreement (STAA), if you **are planning to transfer to University of Colorado-Denver,** you **should complete both two-semester sequences of BIO 1111 & BIO 1112 and CHE 1111 & CHE 1112** at the community college; in addition, electives **are restricted to non-Psychology courses.** If you are planning to attend **University of Colorado-Denver**, you **must take BIO 1111, BIO 1112, CHE 1111, and CHE 1112** and 3 additional credits from the Approved Elective List, which **must be non-psychology courses** to align with the Statewide Transfer Articulation Agreement. If you are planning to attend **Colorado State University**, you **must take BIO 1111 and CHE 1111 and BIO 1112 and/or CHE 1112.** If you do not take both BIO 1112 and CHE 1112, 5 elective credits **must be math or science courses from the Approved Elective List** and 3 additional credits from the Approved Elective List.

You **may take any GT-SC1 or Approved Elective List course** if transferring to CSU-Ft. Collins. In order to earn your Associate of Science degree in Psychology, you **must have two sequential science courses and an additional science course**.

Per the Statewide Transfer Articulation Agreement (STAA), you **must take PHI 1011 or PHI 1012 and six (6) additional credits from at least two different categories** of gtPathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4).

Per the Statewide Transfer Articulation Agreement (STAA), if credits for additional required courses (PSY 1001, PSY 1002, and COM 1150 or COM 1250) **are not required for the major** at a receiving 4-year institution, they **will be applied to the Bachelor's degree** as elective credit toward graduation. Please **check with the receiving institution to determine in which way these courses will be applied.**

If you take more credits in mathematics and science than are listed, it **will reduce the 13 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

SOCIOLOGY ASSOCIATE OF ARTS

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your degree and **should be completed in the order listed**. If you are unable to complete all courses listed in a semester, **complete as many courses in this sequence as your schedule allows**. If you have questions or concerns about your MAP, please **see your Pathways Advisor.**

Program Description
This program is designed for students wanting to complete the first two years of a bachelor's degree at the community college and transfer to a university to complete a BA in Sociology. Social factors and human behaviors in society are explored. Careers often require a BA degree or higher. Sociology is the study of human social behavior, including its organization and the way it has developed over time. Sociology is a social science that explores human social groups, social problems, and change. This program introduces students to Sociology and it includes courses that are common to all four-year institutions in Colorado. Career paths for Sociology degree holders include management, human resources, training and development, research, social services, mental health services, adoption, child care, youth services, disability services, child welfare, victims' rights, labor rights, community organization, and public relations. The Associate of Arts (AA) degree in Sociology prepares students to complete the second half of a Bachelor of Arts (BA) in Sociology at a four-year university.

First Semester

SOC 1001	Intro to Sociology I: GT-SS3	3
GT- AH	PHI 1011/1012 or Any GT-AH	3
ENG 1021	English Composition I: GT-CO1	3
COM 1150 or COM 1250	Public Speaking (COM 1150) or Interpersonal Communication (COM 1250)	3
GT- HI1	HIS 2105/2145 or Any GT-HI1	3
		Subtotal: 15

Second Semester

SOC 1002	Intro to Sociology II: GT-SS3	3
ENG 1022	English Composition II: GT-CO2	3
GT- MA1	MAT 1260/1340 or Any GT-MA1	3
ELECTIVE	Any Approved Elective List Course	3
GT- SS	Any Social Sciences (GT-SS) Course	3

		Subtotal: 15
Third Semester		
REQUIRED	Any Sociology Course from GT-SS3	3
REQUIRED	Any Sociology Course from GT-SS3	3
GT- SC1	ENV 1111 or Any GT-SC1	4
GT- SS	Any Social Sciences (GT-SS) Course	3
GT- AH	LIT 2005/2011/2012/2046 or Any GT-AH	3
		Subtotal: 16
Fourth Semester		
REQUIRED	Any Sociology Course from GT-SS3	3
GT- AH	PHI 1011/1012 or Any GT-AH	3
GT- SC1	GEO 1012, ANT 1005, or Any GT-SC1	4
ELECTIVE	Any Approved Elective List Course	3
ELECTIVE	Any Approved Elective List Course	1
		Subtotal: 14

Total Credit Hours: 60
Important Program Notes:

Per the Statewide Transfer Articulation Agreement (STAA), you **may complete** ENG 1021 (GT-CO1) and ENG 1022 (GT-CO2) **OR** ENG 1022 (GT-CO2) and a gtPathways-approved CO3 course (GT-CO3 (p. 18)).

Additional SOC courses beyond the 5 courses (15 credit hours) listed in the MAP **may not count toward the Sociology major** at the receiving 4-year institution.

Credits for additional required courses may not be required for the major at a receiving 4-year institution. If not required, they will be **applied to the Bachelor's degree as elective credit toward graduation.** Please **check with the receiving institution to determine in which way these courses will be applied.**

Per the Statewide Transfer Articulation Agreement (STAA), you **must take two gtPathways Natural & Physical Sciences courses (GTSC1).**

If you **take more credits in mathematics and science** than are listed, it **will reduce the 7 credits of electives needed**.

You **must complete a minimum of 60 credits** to complete this degree. If receiving financial aid, you **should only take courses and credits as required for this degree**. Check with your advisor to monitor your completion progress.

TESOL 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.

TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES - ABROAD

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor.**

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Teaching English to Speakers of Other Languages Abroad and enter the workforce. Students explore classroom procedures and techniques in teaching and learning the English language successfully. The Teaching English to Speakers of Other Languages (TESOL) program provides high quality instruction through innovative teaching practices and experiential learning. It prepares teacher leaders to be knowledgeable, creative thinkers, and reflective decision makers. This certificate program prepares students for careers to teach English to children and adults in countries around the world.

Total Credit Hours: 16
Important Program Notes:

TEL 2025 **may be taken in either Semester 1 or Semester 2**.

TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES - K-12

MY ACADEMIC PLAN

Courses are displayed to show the fastest path to your certificate and **should be completed in the order listed**. This program functions as cohorts starting fall and spring semester of each academic year. If you have questions or concerns about your MAP, please **see your Program Director or Pathways Advisor**.

Program Description
This program is designed for students wanting to complete a one-year (two semester) Certificate in Teaching English to Speakers of Other Languages K-12 and enter the workforce. Students explore K-12 classroom procedures and techniques in teaching and learning the English language successfully. The Teaching English to Speakers of Other Languages (TESOL) program provides high quality instruction through innovative teaching practices and experiential learning. It prepares teacher leaders to be knowledgeable, creative thinkers, and reflective decision makers. This certificate prepares students for careers as paraeducators or to earn licensure to teach in an elementary or high school classroom. This program is also appropriate for teachers with a bachelor's degree looking to improve their skills teaching English to speakers of other languages.

Total Credit Hours: 16
Important Program Notes:

TEL 2025 **may be taken in either Semester 1 or Semester 2**.

Degree/Elective Information

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 (p. 17) are guaranteed to transfer to Colorado's public four-year institutions. Students may also take classes individually for their enrichment, or career development.

Career and Technical Education (CTE) AAS degree & certificate course requirements are subject to change due to Colorado Community College System mandated renewal cycles and program revisions. These program revisions are necessary to align with course changes in the Colorado Community College System (CCCS) Common Course Numbering System (CCNS)

and/or updated state or national accreditation standards specific to program content. A list of these accrediting agencies is available under the FRCC Program Accreditation section (p. 10) in this catalog. The archived PDF version of this catalog will not contain these updates. To verify the most accurate certificate and AAS degree requirements, please review DegreeCheck in the eWOLF Student Dashboard or view your program MAP listed by Career and Academic Community by clicking on the icon on the left.

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

Degree Descriptions

To learn more about the different types of degrees at FRCC, please visit our website and meet with an advisor to select the best program for you. Click below to view requirements for the different types of bachelor and associate degrees and certificates offered at FRCC.

B.A.S. Degrees

This degree prepares students to enter the workforce in skilled and technical occupations. It builds upon an Associate of Applied Science (A.A.S.) degree enhancing employment opportunities. The B.A.S. degree incorporates applied hands-on learning in a specific area of study (e.g. Geospatial Science Bachelor of Applied Science (p. 103)). View programs by career and academic community (CAC) by clicking on the icon on the left.

B.S.N. Degree

The RN to BSN program is a continuation of preparation for entry-level nursing practice as a registered nurse. The program is a combination of hybrid and online courses, and can be completed in four semesters full-time. For students currently enrolled in the associate degree nursing program as well as those working full-time as a registered nurse, the program is flexible allowing extended time to earn a degree. As some employers show a preference for baccalaureate prepared nurses, the Bachelor of Science Nursing (p. 49) degree can increase eligibility for nursing roles in direct patient care and leadership. The student must be licensed as a registered nurse prior to completion of the RN-BSN program.

A.S. DEGREE

The Associate of Science (AS) Degree provides students with both breadth and depth of knowledge in science and math that prepares them for transfer into a bachelor degree program at a four-year college or university. Students looking to transfer with guaranteed junior standing in a specific field of study may pursue an associate of science degree with designation in the following areas: biology (p. 95), chemistry (p. 96)*, geology (p. 105), fermentation sciences, horticulture business management (p. 107), mathematics, (p. 110) physics (p. 111), or psychology (p. 124).

Many students find **tailoring the AS Degree works well** when transferring **in biology** (p. 95)**, chemistry** (p. 96)**, geology** (p. 105)**, and physics** (p. 111)**. Students should work with an advisor to determine which pathway is best for them.**

While a student **may tailor** the **general Associate of Science (AS) 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 Science Degree** without an indication of a more specific area of study unless the student completes the requirements for an associate of science degree with designation.

**Please note that the AS degree with designation in chemistry requires a student to complete a reverse transfer within 30 hours or 12 calendar months. The student must transfer one gtPathways approved course in Arts and Humanities and in Social and Behavioral Sciences from the university back to FRCC to earn their AS degree with a Chemistry designation.*

Total Credit Hours: 60
Additional Graduation Requirements

- No developmental courses may be applied to this degree.
- Students must have a minimum cumulative GPA of 2.0 (all grades "C" or better) to be eligible to graduate.
- Submit Graduation Application, transfer credits, and Prior Learning Assessment Credit to the Registrar's Office by published deadline.
- Students must complete at least 25% of their degree/certificate credit requirements at Front Range in order to earn their award from Front Range.
- Continuing students without a 12-month lapse in enrollment are allowed to select a catalog published during their enrollment that best aligns with their completed coursework toward their intended program of study.

A.A. DEGREE

The Associate of Arts (AA) Degree provides students with a general liberal arts education that prepares them for transfer into a bachelor degree program at a four-year college or university. Students looking to transfer with guaranteed junior standing in a specific field of study should pursue an associate of arts degree with designation in the following areas: anthropology (p. 112), art history (p. 57), business (p. 26), communication (p. 58), criminal justice (p. 113), economics (p. 118), early childhood education (p. 115), elementary education (p. 118), English (p. 61), French (p. 62), geography (p. 119), history (p. 120), music (p. 71), philosophy (p. 73), political science (p. 122), psychology (p. 123), sociology (p. 125), Spanish (p. 75), and studio art (p. 76).

In addition, we have Associate of Arts (AA) Degrees designed to transfer into specific bachelor degree programs at specific four-year college/universities. These programs are American Sign Language & Deaf Studies (p. 55), Hospitality Management (p. 39), and Health Sciences (p. 40).

While a student may tailor the general Associate of Arts (AA) 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 an indication of a more specific area of study unless the student completes the requirements for one of the areas of designation noted above.

Total Credit Hours: 60

- No developmental courses may be applied to this degree.
- Students must have a minimum cumulative GPA of 2.0 (all grades "C" or better) to be eligible to graduate.
- Submit Graduation Application, transfer credits, and Prior Learning Assessment Credit to the Registrar's Office by published deadline.
- Students must complete at least 25% of their degree/certificate credit requirements at Front Range in order to earn their award from Front Range.
- Continuing students without a 12-month lapse in enrollment are allowed to select a catalog published during their enrollment that best aligns with their completed coursework toward their intended program of study.

A.E.S. Degrees

The Associate of Engineering Science (A.E.S.) Degree provides students with both breadth and depth of knowledge in engineering that prepares them for transfer into a bachelor's degree program at a four-year college or university. Degrees include the Associate of Engineering Science in General Engineering (p. 92), Associate of Engineering Science in Mechanical Engineering (p. 93) and Associate of Engineering Science in Civil Engineering (p. 94).

AAS Degrees & Certificates

These degrees prepare students to enter the workforce in skilled and technical occupations. 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. Associate of Applied Science degree and certificate programs are listed below by Career & Academic Community (CAC).

Business & Information Technology (CAC): Accounting (p. 25), Business (p. 26), Computer Information Systems (p. 30), Cybersecurity, Networking, & Virtualization (p. 34), Highway Maintenance Management (p. 38), and Hospitality Management (p. 39).

Health Sciences & Wellness (CAC): Dental Assisting (p. 42), EMT (p. 43) & Clinical EMT (p. 43), Health Information Technology (p. 43), Integrative Health & Massage Therapy (p. 44), Medical Assistant (p. 48), Nursing (p. 49), Nursing Aide (p. 52), Phlebotomy (p. 52), Advanced Pharmacy Technician (p. 52), Sterile Processing Technology (p. 53), Surgical Technology (p. 53), and Veterinary Technology (p. 54).

Liberal Arts, Communication & Design (CAC): Multimedia Technology (p. 64) and Recording Arts Technology (p. 71).

Manufacturing Automotive Construction & Design Technologies (CAC): Architectural Engineering & Construction Technology (p. 56), Automation & Engineering Technology (p. 77), Automotive Technology (p. 79), Computer-Aided Drafting & Design (p. 59), Electronics Engineering Technology (p. 83), Heating, Ventilation, Air Conditioning, & Refrigeration (p. 85), Interior Architecture & Design (p. 63), Precision Machining Technology (p. 88), Optics Technology (p. 87), and Welding Technology. (p. 89)

Math & Science (CAC): Forestry, Wildlife, & Natural Resources (p. 98), Geospatial Science (p. 103), and Horticulture & Landscape Technologies (p. 106).

Social Science, Education, & Public Service (CAC): Peace Officers Standards & Training (p. 114), Public Safety Dispatch, Early Childhood Education (p. 115), Paralegal/Legal Assistant (p. 121), and Teaching English to Speakers of Other Languages (p. 126).

A.G.S. DEGREE

The Associate of General Studies (AGS) 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.

Total Credit Hours: 60

- A minimum of 15 credits must be completed from approved gtPathways (Guaranteed Transfer) (p. 17) coursework.
- No developmental courses may be applied to this degree.
- Students must have a minimum cumulative GPA of 2.0 (all grades "C" or better) to be eligible to graduate.
- Submit Graduation Application, transfer credits, and Prior Learning Assessment Credit to the Registrar's Office by published deadline.
- Students must complete at least 25% of their degree/certificate credit requirements at Front Range in order to earn their award from Front Range.
- Continuing students without a 12-month lapse in enrollment are allowed to select a catalog published during their enrollment that best aligns with their completed coursework toward their intended program of study.

Transfer Information

COMPLETING AN A.A./A.S. DEGREE 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 in each course) an average of 15 credit hours of coursework that applies to the A.A. /A.S. in each of four consecutive semesters.

5. Continue with the same degree from entrance to graduation.

6. Retain documentation demonstrating that all the above requirements were satisfied (transcripts, advising records, etc.) and file a Degree/Certificate Application.

TRANSFER DEGREES & GUIDED PATHWAYS

The following degrees offered at FRCC provide transfer pathways to Colorado's public four-year colleges and universities in specified liberal arts and science designations. These agreements allow you to graduate with a 60-credit Associate of Arts (AA) or Associate of Science (AS) degree, enroll with junior status at a participating university, and complete the bachelor's degree in no more than an additional 60 credits (for a total of 120 credits). Click here to view the list of Statewide Transfer Articulation Agreements available at FRCC (p. 129).

Statewide Transfer Articulation Agreements

Degrees offered at FRCC provide transfer pathways to Colorado's public four-year colleges and universities in specified liberal arts and science designations. These agreements allow you to graduate with a 60-credit Associate of Arts (AA) or Associate of Science (AS) degree, enroll with junior status at a participating university, and complete the bachelor's degree in no more than an additional 60 credits (for a total of 120 credits)

All degrees with designation and other transfer agreements may be found at: https://cdhe.colorado.gov/transfer-degrees

Courses

This section describes credit courses offered by FRCC. Courses are grouped by subject area and are listed in alphabetical order.

- All courses included in this catalog may apply to program requirements of specified certificates and/or degrees (e.g. AAS, AGS, AA, or AS) with the exception of courses listed on the courses not applicable to any degree or certificate (p. 129) section of this catalog.

- Specialized courses must be specified as allowable to apply toward degree/certificate requirements. You can learn more about specialized courses such as internship, capstone, clinical, etc. by viewing the Specialized Courses (p. 129) section of this catalog.

- Courses with an * have been identified by the Colorado Department of Higher Education as being the State Guaranteed General Education courses. You can learn more about each designation by viewing the GT Pathways General Education Curriculum (p. 126) & GT List (p. 17) sections of this catalog.

To view Programs offered at FRCC by Career and Academic Community (CAC (p. 24)), view our Program Information (p. 21) section of this catalog.

COURSES NOT APPLICABLE TO ANY DEGREE OR CERTIFICATE

All courses below 1000-level are not applicable to any degree or certificate. Course prefixes that include 0000-level coursework include: *AAA* (p. 174)*; ENG* (p. 207)*; and MAT* (p. 235).

In addition, the following 1000-level courses will only apply when specified as a certificate or degree requirement.

MAT 1120* Math for Clinical Calculations

**MAT 1120 currently fulfils the mathematics requirement for the Nursing AAS Degree and Veterinary Technology AAS Degree ONLY. It may be applied as an elective in the AGS degree.*

Specialized Courses

The following specialized courses are offered within each program area. For further information contact a Program Advisor. (Credit hours are variable.)

XXX 1085 - 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.

XXX 1087 - 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.

XXX 1088 - Practicum
Provides the learner the opportunity for the practical application of classroom theory within a given program of study.

XXX 1070-1074 - Clinical
Offers the clinical practicum to apply the related theory.

XXX 1075-1077 - Special Topics
Provides students with a means to pursue in-depth exploration of special topics of interest.

XXX 1078-1079 - Seminar/Workshop
Provides students with select areas of study within a program of study.

XXX 1080-1084 - 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.

XXX 2085 - 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.

XXX 2087 - 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.

XXX 2088 - Practicum
Provides the learner the opportunity for the practical application of classroom theory within a given program of study.

XXX 2089 - Capstone
Focuses on demonstrated culmination of learning within a given program of study.

XXX 2070-2074 - Clinical
Offers the clinical practicum to apply the related theory.

XXX 2075-2077 - Special Topics
Provides students with a means to pursue in-depth exploration of special topics of interest.

XXX 2078-2079 - Seminar/Workshop
Provides students with select areas of study within a program of study.

XXX 2080-2084 - 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.

COURSE LIST A-Z

Courses are listed by subject area/prefix (e.g. ACC) and title (e.g. Accounting) for each discipline. Simply click the link for a drop-down menu to view the entire catalog listing of courses for the specified discipline.

Course Basics 101

- Each course title begins with a three-letter subject area and the course number (e.g., ENG 1021).

- Each course includes a brief course description, credits, contact hours, and prerequisite(s) and/or corequisite(s) if required for the course.

- A prerequisite must be taken before entering a course. A corequisite must be taken prior to, or concurrently with, a course.

- Contact Hours indicate the total number of class hours during the term. Some courses require a course fee.

- To view available classes offered by semester, please visit our Online Class Search via eWOLF and select the term and subject of interest to get started, or speak with a Pathways Advisor.

AAA-	Advancement of Academic Achievement
ACC-	Accounting
AEC-	Architectural Engineering/Construction Technology
AIR-	Air Force R.O.T.C.
ANT-	Anthropology
AQT-	Aquaculture
ARA-	Arabic
ARM-	Army R.O.T.C.
ART-	Art
ASE-	Automotive Service Technology
ASL-	American Sign Language
AST-	Astronomy
BIO-	Biology
BUS-	Business
CAD-	Computer Aided Drafting
CHE-	Chemistry
CHI-	Chinese
CIS-	Computer Information Systems
CNG-	Computer Networking
COM-	Communication
CON-	Construction Technology
CRJ-	Criminal Justice
CSC-	Computer Science
CUA-	Culinary Arts
CWB-	Computer Web-Based
DAN-	Dance
DEA-	Dental Assisting
DEH-	Dental Hygiene
ECE-	Early Childhood Education
ECO-	Economics
EDU-	Education
EGG-	Engineering
EGT-	Engineering Graphics Technology
EIC-	Electricity Ind-Commercial
ELT-	Electronics
EMS-	Emergency Medical Services
ENG-	English
ENP-	Entrepreneurship
ENV-	Environmental Sciences
ETH-	Ethnic Studies
FER-	Fermentation Science
FIN-	Finance
FLD-	Floral Design
FRE-	French
FSW-	Fire Science Wildland
GEO-	Geography
GER-	German
GEY-	Geology
GIS-	Geographic Information Systems
HIS-	History
HIT-	Health Information Technology
HLT-	Horticulture & Landscape Technologies
HOS-	Hospitality
HPR-	Health Professional
HUM-	Humanities
HVA-	Heating, Ventilation, Air Conditioning
HWE-	Health Wellness Education
HWY-	Highway Maintenance Management
IHP-	Integrative Health Professions
IND-	Interior Design
ITA-	Italian
JOU-	Journalism
JPN-	Japanese
LEA-	Law Enforcement Academy
LIT-	Literature
MAC-	Machining Technology
MAN-	Management
MAP-	Medical Assisting Professional
MAR-	Marketing
MAT-	Mathematics
MET-	Meteorology
MGD-	Multimedia Graphic Design
MST-	Massage Therapy
MTE-	Manufacturing Technology
MUS-	Music
NRE-	Natural Resources
NUA-	Nurse Aide
NUR-	Nursing
OSH-	Occupational Safety Technician
OTE-	Optics Technology
OUT-	Outdoor Studies
PAR-	Paralegal

PED-	Physical Education
PHI-	Philosophy
PHT-	Pharmacy Technician
PHY-	Physics
PLU-	Plumbing
PSC-	Political Science
PSY-	Psychology
REC-	Recreation
RUS-	Russian
SCI-	Science
SOC-	Sociology
SPA-	Spanish
STE-	Surgical Technology
TEL-	Teaching ESL
THE-	Theatre
TRE-	Tree Care
VET-	Veterinary Technology
WEL-	Welding
WST-	Women & Gender Studies

FINANCIAL MATTERS

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

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

Tuition & Fees

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

Tuition rates per credit hour for the academic year 2022-2023 are listed below. Rates are subject to change. Fees also apply. See fee explanations below.

	Tuition per credit hour	College Opportunity Fund (COF) Stipend	Total Tuition per credit hour
On campus classes	$260.40	- $104.00	$156.40
Online classes	$367.20	- $104.00	$263.20
Nursing classes	$339.30	- $104.00	$235.30

Payment Plan

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

You need to know:

- By signing up for a payment plan, a non-refundable service fee will be charged.

- If you withdraw from courses after the drop/refund period, you are still responsible for completing your payments.

- You will not be dropped from your current semester’s classes if you fail to make payments on your 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 for future courses.

College Opportunity Fund

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

The College Opportunity Fund allows all resident students to apply the COF stipend to up to 145 credit hours of an undergraduate degree. If a student applies the COF stipend to 145 credit hours and has additional credit hours to complete a degree, the student may apply for a one-time waiver to receive additional COF credits. Students seeking this waiver must meet with a Pathways Advisor to complete the waiver requirements. Requirements include an academic plan, personal statement and institutional COF Waiver form. The Chief Academic Officer will make a determination and communicate the decision to the student within 30 days.

Fees

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

Registration Fee

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

Course Fees

Some courses are assessed course fees to cover the cost of consumable materials and supplies. Certain courses and/or programs require services performed by outside parties. One example is malpractice insurance. A list of fees can be found at https://www.frontrange.edu/tuition.

Student Center-Campus Center Bond Fee

In 2013, students at the Larimer and Westminster campuses voted to approve new bonds or repurpose existing bonds for campus construction and renovation projects. The current fee amounts can be found on our website https://www.frontrange.edu/fees.

Student, Parking and Facility Fees

Student fees are charged at a per credit hour rate and support the operation of Student Life services and the maintenance of parking lots on each FRCC campus. These fees are subject to

change each academic year. Fees are charged regardless of parking on campus, attending programs, etc. to support equal access for all students. The current fee amounts can be found at our website, https://www.frontrange.edu/fees

Fee Disputes

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

Payments & Refunds

The cashier's office at each campus collects all payments for tuition and fees, and disburses student refunds. Each semester, the college sets a date by which payment must be received for course enrollments. This date is known as the **payment deadline** and can be found at https://www.frontrange.edu/paying-for-college/tuition-and-fees/payment-options. Regardless of the payment method (financial aid-grants, scholarships or loans; Deferred Payment plan; third party payment; or payment in full by student, parent, or other), it is the student's responsibility to ensure that payment to cover all tuition and fees is made prior to the published deadline. For enrollments that take place after the published payment deadline, the student assumes financial responsibility for all associated tuition and fees. If payment is not received by the published deadline, the student will have a late charge added to their total amount owed. Please note that changes to the student's schedule can result in an outstanding balance. Payment plans are available for full or partial balances, see Deferred Payment below.

Students are responsible for dropping classes they do not intend to take, even if they do not pay on time. Payment options include:

- Mail the payment (check or official employer/agency authorization only) to the Cashier's Office. Payment must be received by the payment deadline.

- In person at the Larimer, Boulder County and Westminster Cashier's Offices by cash, check, money order, Visa, MasterCard, Discover or official employer/agency authorization.

- Online by accessing your student account through eWOLF with Visa, MasterCard, Discover, or American Express.

- Sign up for a Payment Plan in eWOLF.

- Financial Aid offered loans must be accepted in the Student Dashboard on eWOLF, with all additional requirements completed. Any amount not covered by Financial Aid funding will be the student's responsibility and is due by payment deadline or based on the deferred payment plan set with the College.

Payment Plan

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

You need to know:

- By signing up for a payment plan, a non-refundable service fee will be charged.

- If you withdraw from courses after the drop/refund period, you are still responsible for completing your payments.

- You will not be dropped from your current semester's classes if you fail to make payments on your 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 for additional classes until the balance has been paid.

Financial Obligations

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

Students who are financially obligated to FRCC - whether through an outstanding account balance, returned financial aid, a third party promise to pay, outstanding deferred payment, failure to account for college property in their possession, or allowed to register for additional courses until payment is made. In accordance with state policy, all delinquent student financial obligations, including those from improper withdrawal/drop procedures and the loss of previously paid financial aid, are referred to the state's central collection service.

Bad Checks

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

Credit Card Charge Backs

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

Tuition and Fee Refunds

Students may receive a refund of tuition and fees for any course dropped by the drop deadline or for any courses the college cancels. The payment plan fee is non-refundable. No refunds are given after the drop deadline. Students receiving financial aid

may have their aid adjusted and should check with the Financial Aid Office prior to dropping a course. Student receiving Veteran Administration Educational Benefits should talk to their Veteran Services Advisor prior to dropping a course.

All refunds will be issued electronically based on the selected BankMobile refund preference chosen by the student. All students age 17 years and older will be mailed a BankMobile refund preference selection kit upon their first enrollment in the college. The student can choose to activate the BankMobile Vibe account as a refund preference. Students may select to have their refunds credited to their existing bank account via ACH transfer, or may request a paper check to be mailed. If a preference is not selected, the refund will be issued as a paper check. Refunds for the current semester begin after the last day to drop for the full semester. Credit card payments will be refunded to the original credit card used for payment, whenever possible. For more information, go to http://www.frontrange.edu/paying-for-college/refunds.

Financial Aid

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

Application Procedure

1. Submit an **Application for Admission** to FRCC.
   a. Only students who are degree/certificate seeking are eligible for financial aid funding.
   b. 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).
   a. The application is available on the U.S. Department of Education's website at https://studentaid.gov.
   b. A new FAFSA must be submitted each academic year, with the yearly application opening October 1st every year.
   c. Financial aid applications are accepted throughout the academic year with a priority consideration date of April 1st to be considered for certain limited available funds.
   d. If you are not able to file a FAFSA due to citizenship status, check here for CASFA/ASSET information and filing options.
3. Additional information is sometimes needed by the Financial Aid Office to determine eligibility for funding.
   a. Submit all requested documentation as soon as possible to expedite the process.
   b. Students can view any additional requirements or supporting documentation that is needed by clicking on the "Financial Aid Requirements" icon on the eWOLF Dashboard.
   c. Submission methods may vary according to the document request.
   d. A financial aid offer will not be made until supporting documentation is complete.
4. Aid offers for the fall term are generally sent beginning the prior spring term and continue throughout the aid year once eligibility has been determined.
   a. Notification of offers are sent via email to the student.

Eligibility Criteria

To qualify for Federal financial aid, students must meet at least the following criteria:

- Be enrolled in an eligible degree and/or certificate program.

- Be a U.S. citizen, U.S. permanent resident, or eligible non-citizen as defined by the U.S. Department of Education.

- Have a high school diploma or passed the General Equivalency Diploma (GED).

- Not owe a refund on a Federal grant or be in default on a Federal student loan.

- Apply in a timely manner and submit all documentation and/or information needed by the Financial Aid Office to make a determination of eligibility.

- Maintain eligibility requirements under Financial Aid Satisfactory Academic Progress policy.

- Must be taking courses required for your degree/certificate program of study.

Satisfactory Academic Progress

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

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

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

Funding Sources

Students have access to many different sources of funding which include grants (p. 135), work study (p. 135), scholarships (p. 135), and loans (p. 135). In this section (p. 135), you will find general information about different funding sources and summer aid (p. 135). For more detailed financial aid information, please visit our website - Paying for College.

Grants

1. **Federal Pell Grant.** A federal grant 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 Grant (FSEOG).** A federal grant designed to provide assistance to students with documented exceptional need to help pay for postsecondary education. Awards must not exceed $4,000. Students must complete a FAFSA. Funds are limited.
3. **Colorado Student Grant.** A Colorado grant program funded by the Colorado General Assembly to provide assistance to qualified undergraduate students with documented financial need at state institutions of higher education. Students must be Colorado residents and complete a FAFSA. Funds are limited.
4. **Colorado CTE Grant.** A Colorado grant program funded by the Colorado General Assembly to provide tuition assistance to qualified students with documented financial need. Students must be Colorado residents and complete a FAFSA. Funds are limited.

Work Study

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

Scholarships

1. **FRCC Foundation Scholarships**
2. **Outside/Private Scholarships**
3. **FRCC Student Success Institutional Scholarship**

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

Loans

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

Summer Aid

Funding for summer does not require a separate application and will be offered for students who have submitted a FAFSA for the current and possibly the upcoming award year. Federal Pell Grants are widely available, other funding sources such as work study and unused loan eligibility from the current award year.

Additional Information

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

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

Veteran Benefits

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

for VA educational benefits. In addition, developmental courses require eligible placement scores in order to be approved for VA educational benefits. The VA educational benefits office requires prior training and transcripts from previous colleges to be officially evaluated within two semesters. Failure to comply within the stated timeframe will prevent VA enrollment certification. For more information on VA educational benefits, please check with your local VA office or go to www.benefits.va.gov.

In compliance with Title 38 of the U.S. Code of Federal Regulations, §3679, prior to the published tuition deadline, students eligible for benefits through Vocational Rehabilitation & Employment and the Post-9/11 G.I. Bill® must have documentation from the VA demonstrating continued eligibility for VA education benefits. Acceptable documentation is a recent award letter, Certificate of Eligibility, or a Statement of Benefits from www.VA.gov for students using the Post-9/11 G.I. Bill® or a current VA Form 28-1905 from the case manager of students using Vocational Rehabilitation & Employment. Provided this information is submitted prior to the tuition deadline, students will be held in classes without any penalty until tuition and fees are paid by VA.

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

Tuition information is reported to VA after the drop deadline and payments will be applied to student accounts once received by FRCC. Failure to successfully complete courses, including failed courses, drops, and withdrawals, may result in a reduction of benefits payable to the student and/or FRCC. Students may also be required to reimburse VA or FRCC for previously paid benefits. If for any reason, VA determines a student is ineligible for benefits, if benefits expire during the term or if the student is not eligible at the 100% funding level, the student will be responsible for paying the balance on his or her account.

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

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

Students receiving benefits through Montgomery G.I. Bill®-Active Duty, Montgomery G.I. Bill®-Selected Reserves, or Dependents’ Educational Assistance must have pending financial aid, payment in full, or a payment plan scheduled before the tuition deadline to remain enrolled in courses.

G.I. Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at https://www.benefits.va.gov/gibill.

Army: Visit ArmyignitED

Air Force/Space Force: Visit AI Portal

Coast Guard: Coast Guard - Request Benefits

Navy: Navy - Request Benefits

Marines: Marines - Request Benefits

National Guard: National Guard - Request Benefits

ACADEMIC MATTERS

FRCC has guidelines and standards to inform students of FRCC expectations. The following is a summary of the information students need to know.

Grades, Honors & Transcript Requests

Grades & Definitions

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

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

A	Excellent or Superior
B	Good
C	Average
D	Deficient
F	Failure
I	Incomplete (p. 139)
P	Pass (p. 139)
P/A	Satisfactory (A-level) work in a designated developmental course (p. 139)
P/B	Satisfactory (B-level) work in a designated developmental course (p. 139)
P/C	Satisfactory (C-level) work in a designated developmental course (p. 139)
F/D	Unsatisfactory (D-level) work in a designated developmental course (p. 140)
F/F	Unsatisfactory (F-level) work in a designated developmental course (p. 140)
I/F	Incomplete for developmental courses (rolls to F/F if not completed)
W	Withdrawal (p. 140) (Student was withdrawn at their request after drop deadline) (p. 140)
WX	Student was administratively withdrawn through appeal, no fault, etc.
WD	Student was administratively withdrawn for cause
AU	Audit (p. 139)
PLA	Prior Learning Assessment Credit ("C" or better)
CR	Credit
IP	In Progress
NC	Non-Credit
R	Repeated Course (p. 140)
SP	Satisfactory Progress (p. 140)

Z	Grade not yet reported (p. 140)
AW	Administrative Withdrawal (ENDED Spring 2022)

Grade Point Average (GPA):

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

A = 4 grade points

B = 3 grade points

C = 2 grade points

D = 1 grade point

F = 0 grade points

Course	Credits	Grade	Grade Points	GPA
MAT 1340 College Algebra	4 cr.	C (2 pts)	8	2.0
HWE 1063 Fitness Condition.	2 cr.	A (4 pts)	8	4.0
ENG 1021 English Comp I	3 cr.	B (3 pts)	9	3.0
BIO 1005 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.

Prerequisite Course Information

Prerequisite courses are courses that must be taken before entering another course. These are indicated in each course description in the catalog.

Students must earn a grade of "C" or better in the prerequisite course to enroll in the course which follows.

Courses that require a "B" or better are noted in this catalog. An earned grade of "D" or "F" will not satisfy the prerequisite requirement and will require the student to retake the course until a "C" or better is reached or repeat course limits are exhausted

Grades Required for Certificates & Degrees

Students must earn a grade of "C" or better for all courses applied toward an 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 any certificate. Some programs or courses also require that students achieve specific grades or GPAs to continue in the program. Some certificate, associate degree or bachelor's degree programs may have more restrictive catalog year requirements and grade requirements, they may limit "P" (Pass) semester hours toward the degree and certificate.

Honors

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 6 college-level credits during the term to be eligible for this recognition.

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

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

Graduation Honors:

Graduation honors recognize outstanding academic achievement throughout a student's academic career. The honors are awarded to students who complete the requirements for an associate degree and earn a 3.5 or better cumulative GPA at FRCC. Only completed college-level courses taken at FRCC will be included in the GPA calculation used for graduation honors. P grades and other grades for Developmental Education coursework are not 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

Repeated Courses & Limits

Repeat Course Limits

- All college-level courses may be repeated. Each course registration and grade received will be listed on the transcript. The highest grade will be used in the GPA calculation. There will be no limitations on course grades that are eligible for repeat. All credit hours earned for initial

and repeated courses will be deducted from a student's remaining COF stipend eligible hours.
- In the event that the same grade is earned two or more times for a repeated course, the most recent instance of the duplicate grade will be included in the term and cumulative GPA.
- "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. The State Faculty Curriculum Committee will designate courses that may be "repeated" based on program requirements.
- FRCC has the discretion to deny repeat enrollment in a course beginning with the second repeat on a case-by-case basis for reasons which may include, but are not limited to financial and educational best interests of the student and course availability. Repeating a course may impact the student's financial aid eligibility.

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 2006, then the student must complete a repeat course petition form for the developmental coursework and submit it to the Office of the Registrar.

Transcript Requests

Please note the following information when requesting an FRCC transcript:

- Official transcripts are ordered online. Students can request and pay for an electronic or paper transcript via the student account in eWOLF or at www.frontrange.edu/transcripts. Electronic transcripts are delivered in a PDF format. Students who are not able to pay with a credit card can contact the Office of the Registrar for other options.
- Transcripts are not released if a student has financial obligations to the college or another college in the Colorado Community College System.
- Transcripts are released in accordance with FERPA. (See Family Educational Rights and Privacy Act in the Legal Notices section of the catalog.)

Grade Definitions:

AU - Audit:

By auditing a course, a student may participate in course activities, but does not receive a formal transcript grade. Students must indicate intent to audit a course by the add/drop deadline. The deadline for adding/dropping a course with a refund is the deadline (Census 1). 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 the Office of the Registrar with final grades for the semester. The Office of the Registrar will send a copy of the "Incomplete Grade Contract" to the student. The incomplete grade will be assigned on the class roster at the time of the submission of grades.

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

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

I/F:

Incomplete for developmental courses (rolls to F/F if not completed within required time period)

P - Pass

A "P" grade indicates that the quality of student work in the course is equivalent to "C" or better. A "P" grade will indicate that the quality of students' work in the course is equivalent to "C or better." "P" will count in attempted and earned credits, but will not carry any quality points. Therefore, "P" grades will not be included in GPA calculations. They may not be applied to any course in the Colorado Guaranteed Transfer Program for General Education or guaranteed to transfer. Students should talk with their advisor, faculty/instructor and transferring institution for applicability before requesting "Pass (P)" grade.

F - Fail

P/A, P/B, P/C:

P/A - Passing (A-level) work in a developmental course

P/B - Passing (B-level) work in a developmental course

P/C - Passing (C-level) work in a developmental course

F/D, F/F:
F/D - Not-passing (D-level) work in a developmental course

F/F - Not-passing (F-level) work in a developmental course

W - Withdrawal:
W - Student was withdrawn at their request after drop deadline

WX:
WX - Student was administratively withdrawn through appeal, no fault, etc.

WD:
WD - Student was administratively withdrawn for cause

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

Z - No Grade Submitted:
This temporary grade symbol is assigned by the Registrar when a grade is not received from the course instructor. This grade is replaced and credit awarded upon assignment of a grade by the instructor.

Repeat Field Indicators - I or E:
Assigned for repeated courses on the student's transcript, an "I" will indicate Include in earned hours and GPA calculation, or an "E" will indicate Exclude from earned hours and GPA calculation.

Last Day of Attendance:

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

Academic Standing

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

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

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

Please click here for Catalog Usage (p. 4) information.

Definitions, Standards, and Practices

- Abbreviations: Cumulative Grade Point Average = CGPA; Term Grade Point Average = TGPA.

- Only courses taken "in residence" will be used for this procedure; "in residence" means taken at the student's home institution. Courses taken elsewhere and transferred in do not apply. The GPA calculations for this procedure may not match those used for financial aid purposes or athletic eligibility.

- Academic Standing applies to all students who have attempted 9 or more credits while attending a college in the Colorado Community College System.

- During the student's first 8 credit hours of enrollment of college level coursework, FRCC will monitor satisfactory progress through the Academic Alert process.

- Initial Standing is assigned to students who have attempted **fewer than 9** cumulative credit hours with a CGPA of greater than or equal to 2.00 for all classes attempted.

- Academic Alert is assigned to students who have attempted **fewer than 9** cumulative credit hours with a CGPA of less than 2.00.

- Good Standing is assigned to students who have attempted **at least 9** cumulative credit hours and have a CGPA of greater than or equal to 2.00 for all classes attempted.

- Academic Probation is assigned to students who have attempted **at least 9** cumulative credit hours and have a CGPA of less than 2.00 for all classes attempted.

-Students who raise their CGPA to at least 2.00 during the Academic Probation term will be returned to Good Standing for the subsequent term.

- Students who earn a TGPA of at least 2.00 for all classes attempted during the Academic Probation term, but fail to raise their CGPA to 2.00 or above will be allowed to attend the next term, but will remain on Academic Probation. This is called Probation (Continuing).

- Students who earn a TGPA of less than 2.00 for all classes attempted during the Academic Probation term will be suspended and will not be allowed to enroll at any CCCS college for the next term, excluding summer term (as summer term may not be used as a "suspension term").

Academic Suspension Rules

- Summer term may **not** be used as a "suspension term".

- Summer term may be used to remediate (improve) the GPA. If a student wishes to enroll for summer term after being suspended, they will need to follow their home institution's appeal process.

- Initial suspension is for one term, excluding summer term.

- A second suspension is for two terms, excluding summer term.

- If a student who has served the suspension time for initial suspension or second suspension wishes to return, the student will be allowed to re-enroll only after meeting with an academic

advisor at the CCCS College that the student wishes to attend. The student will be placed on Academic Probation. (See FRCC Academic Suspension Procedures).

- A third suspension is for two full years, or 4 academic terms excluding summers.

- If a student who has served the third suspension time of two years wishes to return, the student must meet with an academic advisor at the CCCS College that the student wishes to attend in order to get the suspension lifted.

FRCC Academic Suspension Procedures

- A student who has been placed on initial or second academic suspension status by any CCCS college may appeal the suspension for unusual or mitigating circumstances by meeting with their Pathways Advisor and submitting a College Wide Appeal Form. If the appeal is approved, students will remain on academic probation (continuing) and must complete the semester with a TGPA of 2.00 to continue enrollment.

- A student who has been placed on third suspension status by any CCCS college will not be permitted to appeal and must remain on suspension for two years.

Academic Renewal

The purpose of Academic Renewal is to allow a student the opportunity to remove a maximum of 30 semester credit hours of unsatisfactory academic performance from the GPA calculation. Only grades of "D" and "F" are eligible for Academic Renewal and exclusion from GPA calculation. Courses and grades approved for Academic Renewal remain on the transcript but are excluded from the GPA calculation.

A student applying for Academic Renewal must meet the following criteria:

1. In order to apply for Academic Renewal, students must wait a minimum of 2 academic years from the last term being considered for Academic Renewal.

2. Students must be active and currently attending FRCC.

3. Students must have enrolled and successfully completed with "C" or better grades in the same term at least 6 credit hours with a 2.0 term GPA to be awarded Academic Renewal.

4. Students can only be granted Academic Renewal once, and it is not reversible.

5. Students applying for Academic Renewal must complete the *Academic Renewal Application Form* for their Pathways Advisor to review, and then submit it to the Office of the Registrar.

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

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

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

Students applying for Academic Renewal are responsible for investigating the impact of renewal on transfer admission, financial aid, remaining COF stipend eligible hours, VA educational benefits, and other agencies' policies. For clarification of the scope and definition of this policy, speak with your Pathways Advisor.

Graduation Preparation

Here's how to prepare for graduation:

STEP 1: At least one semester before you graduate log into eWOLF and click on the DegreeCheck icon on the Student Dashboard. DegreeCheck is an online degree audit system. If you have questions please see a Pathways Advisor.

STEP 2: If you have credit from another institution that you wish to apply toward your program of study at FRCC, complete a Transfer Credit Evaluation Request form by the graduation application priority deadline for the term in which you wish to graduate. The online request form is at: https://frontrange.formstack.com/forms/transfer_credit_evaluation_request. And, request that official transcripts from other institutions - an original transcript from each institution - be sent directly to FRCC. (Official transcripts by definition are sent from one school to another. FRCC cannot accept transcripts that are hand-delivered.) If you have approved Prior Learning Assessment Credit, all documents must be submitted by the graduation application priority deadline.

STEP 3: Apply for graduation by the priority deadline for the term in which you wish to graduate. The online application is at: https://www.frontrange.edu/graduation-and-beyond/graduation

Note that:

- The name you request to be printed on your diploma must match college records. To update your records, please log into your student account in eWOLF and submit the Personal Identification Change Request.

Degree and Certificate Requirements

For Degrees Students MUST:

- Complete a minimum of 60 semester hours for the Associate of Arts (A.A.), Science (A.S.), or General Studies degree (A.G.S.), or a specified number of semester hours for an Associate of Applied Science degree. Complete 15 credit hours of general education coursework for the AAS degree.

- Complete a minimum of 120 semester hours for a Bachelor's degree.

- Must earn a grade of "C" or better in all courses in order to meet program requirements.

Note: - "F" grade(s) will not count or be applicable toward any associate, bachelor and certificate degree program.

- "P" grade will not count for any Guaranteed Transfer course.

- No more than 6 semester hours of a "P" grade will apply to an Associate of Arts or an Associate of Science degree.

- Some certificate, associate degree or bachelor's degree programs may have more restrictive catalog year requirements and grade requirements, they may limit "P" (Pass) semester hours toward the degree and certificate.

- A grade of "C" or better is required in each course applied to the degree in order to be accepted for guaranteed transfer as described in any applicable CCHE Transfer Policy.

- Must complete a minimum of 25% residence courses towards a degree at FRCC. This 25% includes online courses taught by FRCC. CCCOnline courses are also considered FRCC courses when the student registers for those courses through FRCC.

- Developmental courses will not be applicable toward any associate degree program.

- May not apply more than a total of 6 semester hours of independent study courses, variable credit courses or internship courses to an associate, bachelor degree program, unless otherwise specified.

- No more than a combined total of 3 semester hours of PED/OUT/DAN can be applicable toward any degree.

- To obtain a second degree, a student must meet all degree requirements as well as complete 15 additional semester hours at FRCC that apply toward the second program of study.

- Provide official transcripts to the college if transfer credits are to be applied https://www.frontrange.edu/getting-in/transfer-students

- Complete a degree/certificate application by the priority deadline at https://www.frontrange.edu/graduation-and-beyond/graduation

- If necessary and due to extenuating circumstances, request a course substitution from the program chair. The request must be documented on the Course Substitution Form and approved by the appropriate dean and Chief Academic Officer.

- Complete all course requirements in effect for the officially declared program of study as published in the college catalog. FRCC catalogs are effective beginning each Summer Semester for students enrolling at Front Range Community College for the first time.

Note: 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.

-When a program is closing (teach-out) and will no longer be offered at FRCC only those students that are currently declared in our student information system may complete that program.

- Students that are declared in a program that is closing (teach-out) will need to complete all course requirements and apply to graduate to receive that degree within the designated teach-out time frame.

- No additional students (new or current student(s)) can declare in a program that is closing (in teach-out).

- Continuing students who have not had a 12-month lapse in enrollment will be allowed to use the requirements listed in any catalog published while continuously attending the college. Students may not combine requirements from multiple catalogs in order to graduate.

For Certificates Students MUST:

- Complete all course requirements listed in the catalog.

- Earn at least 25% of the total certificate credit hours at FRCC.

- Earn a grade of "C" or better for all courses required for the certificate. Please note that some programs require a higher GPA or have minimum required grades above a “C” to be eligible for a certificate.

- Provide official transcripts to the college if transfer credits are to be applied https://www.frontrange.edu/getting-in/transfer-students.

- Complete a degree/certificate application by the priority deadline at https://www.frontrange.edu/graduation.

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

Commencement

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

Boulder County Commencement

Larimer Commencement

Westminster & Brighton Commencement

Transferring Credit to FRCC

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

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

- FRCC will only accept transfer credit from post-secondary institutions accredited by one of the six regional accrediting associations. Credits earned at nationally accredited or unaccredited institutions are not transferable to FRCC.
- Only courses which are applicable to students' FRCC degree or certificate requirements are generally accepted in transfer.

- Courses accepted in transfer MUST match the content and meet or exceed the rigor of the accepting institution as determined by the professional judgment of the transfer evaluator or department chair.
- Transfer credit is accepted as specified by legislated and CCCS articulation agreements.
- The college may examine credits to ensure that the content is not outdated or obsolete. Please note that some courses that are more than 10 years old may not be transferable. In addition, science courses must be no more than 7 years old for some health programs (please check with the department).
- Courses will be evaluated against the Common Course Numbering System.
- The official FRCC transcript will include courses taken at the institution and those transfer credits requested by the student.
- Courses will be transcribed with CCCNS course number, title, prefix and the number of credits awarded by the transferring institution.
- Grades for transfer courses will be recorded in Banner and show on the official transcript. Grades for transfer courses are not included in the Grade Point Average.
- Prerequisite courses below the 100 level will not be accepted in transfer and will not appear on the transcript, but will be noted in the student's record.
- A grade of "C" or better, "P", "S" (when representing at least "C" level work or better) is required for transfer. Transfer credit will not be awarded for courses with "D", "F", or "U" grades.
- There is no limit to the amount of credit transferred into FRCC; however, no more than 75% of degree or certificate requirements may be completed using transfer credit. At least 25% of degree or certificate requirements must be earned at FRCC.
- Upper-level courses can be accepted in transfer IF the course can be equated to a course in CCCNS.
- Elective courses that do not equate to a CCCNS course will be listed with the appropriate prefix, numbered as 9099 and include "Elective" with a colon and then an entry to describe the course content. If no appropriate prefix is included in the CCCNS then the elective course will be given either the prefix TRN for Transfer Elective or CTE for Career Technical Elective. The course number will be 9099, and the title will include a colon and an entry to describe the course content.
- Prior Learning Assessment credits will be accepted as determined by the CCCS Prior Learning Assessment Credit Manual.
- Transfer courses that have the GT designation will be noted as GT courses. If the course is not present in the CCCNS then it will be transcribed with the prefix GTP for GT-Pathways, the applicable GTP course number, and the course title that matches the GT designation, (e.g., CO1, AH3, MA1, etc.)
- Transfer credits will be awarded as governed by CCHE and State Board policies and System President procedures.
- Quarter hours and other non-standard credit hours that are accepted in transfer will be converted into semester credit hours.

Transfer of Credits for VA Beneficiaries

The evaluation of previous post-secondary education and training is mandatory and required for VA beneficiaries. For students utilizing Veterans benefits who are approved for transfer credit as a result of this evaluation, the institution will grant appropriate credit, reduce the program length proportionately, notify the student and Veterans Affairs in writing of this decision, and adjust invoicing of the VA accordingly.

Transfer of International Credits

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

For information see the **Academic Suspension Appeals** section.

Prior Learning Assessment (PLA) Credit

The Colorado Community College System (CCCS) awards credit for prior learning assessment based on board policy 9-42 of the State Board for Community Colleges and Occupational Education. For FRCC PLA information please view here.

Prior Learning is non-college or experience-based learning attained outside the sponsorship of accredited post-secondary education institutions. Prior Learning Assessment (PLA) Credit includes learning acquired from work and life experiences; community and volunteer extension courses; individual study and reading; civic, community and volunteer work; and participation in informal courses and in-service training sponsored by associations, business, government, and industry. PLA Credit is not awarded for **EXPERIENCE**, but for college-level **LEARNING** that entails knowledge, skills, and competencies obtained as a result of their prior learning experience. Although PLA Credit is tuition-free, a fee will be assessed based upon assessment method. These methods include:

Standardized Tests

- College Level Examination Program (CLEP)

- Excelsior College, UExcel / Formerly American College Testing Proficiency Program (ACT-PEP/RCE/EXCELSIOR)

- DSST, formerly Defense Activity for Nontraditional Educational Support (DANTES)

- Advanced Placement (AP)

- International Baccalaureate (IB)

Institutional Challenge Examinations

- Examination equivalent to the comprehensive exam that assesses all competencies/outcomes of the course.

- Examination may be written, oral, demonstration or a combination of all three

- Evaluated by a designated subject matter expert

Published Guides

- American Council on Education (ACE) for military training & experiences

- ACE (non-collegiate) for industrial and corporate training programs

- Other published guides developed by nationally recognized organizations

Portfolio Assessment
Portfolio requirements and assessment determined by college faculty for work or life experiences that meet the following criteria:

- The learning is demonstrable
- The learning includes both theoretical and applied components
- The learning is at the college level, and
- The learning is equivalent to a specific college course or courses in the student's program of study

Faculty Evaluated Industry and Workplace Credit

Faculty evaluation of non-collegiate training programs that result in industry certifications, professional licensure, apprenticeship completion, and other workplace skill development.

Note: Students, staff and faculty can learn more about the Colorado Community College System PLA Credit System by visiting https://www.cccs.edu/policies-and-procedures/system-presidents-procedures/sp-9-42-prior-learning-assessment-credit/.

Standards for Awarding Credit for PLA

- Academic credit will only be awarded for those courses directly applicable to curriculum requirements at FRCC and to the student's declared certificate or degree program listed in the college's catalog.

- A student may not apply for PLA credit for a course in which they are currently enrolled.

- All work assessed for PLA must meet or exceed "C" level work. Minimum cut-off scores on standardized tests are also established to meet the "C" grade level. A student must take the course if they do not meet the minimum cut-off score.

- A student may use PLA to fulfill all degree/certificate graduation requirements except for the mandatory 25% residency requirement. The only exception is credit for Institutional Challenge Examinations, which can be applied to the mandatory 25% residency requirement.

- If pursuing a transfer degree (A.A., A.S., or A.G.S - articulated degree program), PLA will be granted for the purpose of satisfying graduation requirements. Because credits may not transfer to all colleges, contact your transferring college to determine their PLA requirements.

PLA Policies and Procedures

To be eligible for PLA credit, a student must be enrolled in a program of study with a declared major.

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

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

Credit may be awarded for GT courses. Public four-year institutions may recalculate scores received on National Standardized Exams.

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

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

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

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

Transferability of PLA Credit

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

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 assessment.

Secondary to Post-Secondary Articulation Agreements

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

Appeals

Colorado Department of Higher Education Appeal

In addition to hearing appeals regarding the state guaranteed general education program, a student may appeal directly to the Colorado Department of Higher Education (CDHE) (https://highered.colorado.gov/Academics/Complaints/FileComplaint.asp) when the issue involves one of the following areas:

- Violation of the Student Bill of Rights (see Student Bill of Rights (p. 149))

- Noncompliance with Colorado Department of Higher Education (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

The Colorado Department of Higher Education (CDHE) appeal process is not designed to resolve disputes between an

individual and an institution that involves grades, billing, terms of employment or athletic eligibility. Front Range Community College tuition classification decisions cannot be appealed to the Colorado Department of Higher Education (CDHE).

Procedures:

To initiate an appeal with the Colorado Department of Higher Education (CDHE), submit a written request (letter or email) describing the issue(s) and steps taken to resolve the issue with Front Range Community College. Eligible appeals, as indicated above, will follow the full appeal process. Appeals to FRCC will be referred to the appropriate college authority. For more information regarding Colorado's Student Appeal Process, go to https://highered.colorado.gov/filing-student-complaint

Academic Appeal Procedures

1. Statement of Purpose

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

2. Basis for an Academic Appeal

An academic appeal may be initiated for the following:

- Denial of program completion/graduation

- Academic dismissal from a program

- Appeal an end of semester grade (final grade)

- Denial of program admission, clinical or practicum placement due to disqualifying results on a criminal background check (see separate process below).

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

3. Procedure

- 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.

- Formal Appeal - A College Wide Appeal Form must be initiated according to the procedures and timelines listed below:

1. Final grade appeals must be initiated by the student within thirty calendar days of the awarding of the grade by the instructor after the semester ends.
2. 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.
3. The student may initiate a formal appeal by submitting a College Wide Appeal Form. Appeals may be submitted outside the timelines indicated above only if documented extenuating circumstances exist. These circumstances must be fully explained in the College Wide Appeal Form and accompanied by supportive documentation. Acceptance of late appeals will be at the discretion of the Instructional Dean.
4. The Dean of Instruction will convene an administrative hearing.
5. 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.
6. The instructor may submit written statements by other individuals having information regarding the complaint. If a student wishes to submit supporting documentation with their appeal, it must be uploaded with the College Wide Appeal Form before submitting online or it can be submitted to the Welcome Center Desk on campus.

   After the hearing, the Dean of Instruction will review all oral and written statements and reach a decision. Students will be notified of the appeal decision via their student issued CCCS email account, accessible through eWOLF within ten calendar days after the hearing. A written notification will also be sent to the instructor.

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

4. Criminal Background Check Appeal Process

To appeal denial of program admission, practicum or clinical placement due to disqualifying results on a criminal background check, the process is as follows:

- Informal Appeal – This process must be used first. If a criminal background check report provides results that may disqualify a student from participating in a program, practicum, or clinical placement, a notification will be sent to the student via certified mail. If the results received on the report are inaccurate or incomplete, the student has 10 calendar days to contact the college to dispute the results. If the results on the background check report are correct, the college representative will discuss the charges or pending charges with the student to collect more information to determine if the charges have a direct relationship to the student's participation in a program, practicum or clinical setting. If the issue is not resolved in the informal process, the student may initiate the formal appeal process.

- Formal Appeal – To initiate a formal appeal a College Wide Appeal Form must be initiated and include all information/documentation within 5 calendar days of informal appeal discussion with college representative. This appeal will be forwarded to an appeals committee who will make a final determination of program admission, practicum or clinical placement within 5 calendar days. By appealing, the student gives the appeals committee permission to view results of their background check. All decisions of the committee are final.

Academic Suspension Appeals

- Students may appeal their academic standing based on procedures developed by their home college or the CCCS College they wish to attend. At a maximum, students may appeal to their home college and to one other CCCS College of their choice.

- If the student's suspension appeal is approved, the student will be placed on Academic Probation.
- If the student's suspension appeal is not approved, the student may be dropped from all courses registered for the upcoming terms at their home college. Students are ultimately responsible for their enrollment and need to check their enrollment schedule for accuracy.
- The student needs to check with their home college regarding enrolling for summer term classes.

  For more information see Academic Standing (p. 140).

Transfer Credit Appeals Process

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

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

For more information, contact the Office of the Registrar at 303-404-5414.

Procedures for Transfer Credit Appeal at the College Level:

Appeal and Secondary Decision

- Students with questions or concerns about their transcript evaluations should contact the Transcript Evaluator who provided the evaluation. If the question or concern cannot be resolved between the student and Transcript Evaluator, the student may formally appeal in writing to the Associate Registrar within 15 calendar days of the date of the evaluation.

- 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.

- The appointed college official will have 15 calendar days to review the student’s appeal and inform the student in writing of the decision on the appeal including the rationale for that decision. In addition, the student shall be informed in writing of the process for appealing this decision.

- The student is informed by the appointed official of the remaining appeal options. Failure to inform the student will result in the decision being considered null and void. The student’s request will prevail and cannot be overturned by the college.

Appeal beyond Secondary Decision

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

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

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

Course Substitution Appeal

Individual programs may have designated specific courses to meet general education requirements. When not specified within the specific degree program, students may select courses from the Approved General Education Course List for the A.A.S. degree. A Program Advisor must approve any course substitution to the specific program requirements.

Students must meet with a Faculty Advisor and complete the course substitution form. The appeal is reviewed by the Dean of Instruction and forwarded to the Chief Academic Officer for determination.

STUDENT MATTERS

Registration

Before registering for courses, meet with your Pathways Advisor and refer to DegreeCheck or Navigate, which will keep you on track. The DegreeCheck and Navigate icons are located in eWOLF in the Student Dashboard. Registration instructions are published on-line through our website at https://www.frontrange.edu/registration. In addition, in-person registration assistance can be obtained on campus at the Admissions & Outreach Office, Advising, the Student Success Center or Welcome Desk.

Course Prerequisite and Co-requisite Requirements

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

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

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

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

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

- ACT or SAT scores
- AP test scores
- CLEP scores
- DSST scores
- Other placement test scores
- Prior college level credit earned from a regionally accredited university or college completed with a grade of "C" or better. This credit can, in most cases, be more than 5 years old. Science courses using pre-requisites must have been completed within the last 7 years. All other coursework should be completed within 10 years.

To have test scores or prior college credit evaluated for prerequisite exemption, or to determine if you need to take an academic assessment before registering for classes, complete the Pre-Registration form. Be prepared to upload documentation such as test scores (e.g. ACT or SAT) and/or transcripts (official or unofficial).

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

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

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

Course Load/Credit Hours

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

12 + credit hours = full-time

9-11 credit hours = 3/4 time

6-8 credit hours = 1/2 time
0.5-5 credit hours = less than 1/2 time

Credit hours are awarded on a semester basis. Students must receive course overload approval from an Academic Advisor, Dean, and/or their designee to enroll in more than 18 credits in any semester. In order to complete a degree within 2 years, a student must complete at least 30 credit hours per academic year.

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

Adding and Dropping Courses

To add or drop courses, students need to log into their eWOLF account or Navigate. Students can add classes to their course schedule until the published deadline for that course. Students can drop courses from their course schedule and receive a refund up to the published drop (census) deadline for that course. Dropping a course deletes the course from the student's record. Failure to officially drop a course by the published deadline will result in a financial obligation for the course tuition and fees and may result in the assignment of a failing grade. Add and drop deadlines for our main part of terms are published each semester at https://www.frontrange.edu/deadlines. Students can view their course(s) specific drop (census) deadlines through their eWOLF account (detailed schedule), Navigate or through their course syllabus. It is the student's responsibility to add or drop courses by the published deadline.

Drop for Non-Attendance

Although it is ultimately the responsibility of a student to drop a course that they do not plan to attend, FRCC faculty members may report students who have not attended or submitted course assignments (exams, discussions, assignments, etc.) as a "No-Show" which will cause the student to be dropped from the course for the semester. Once dropped as a No-Show, a student cannot re-register in that same section, regardless of No-Show reason. In addition, the student could be dropped from any prerequisite or co-requisite course(s), regardless of attendance in the prerequisite/co-requisite course(s). To avoid being dropped, please plan to attend the early sessions of your course(s) and ensure that you meet all assignment deadlines. Being dropped for non-attendance can have negative consequences for students using financial aid or Veteran's benefits.

Course Waitlist

When a course is full, a waitlist is created to facilitate registration for open spaces that may occur. The waitlist allows students an opportunity to get into a course that is currently full but may have openings prior to the start of the course. The waitlist will record the time and date that the student placed his/her name on the waitlist and students will be notified of an opening to enroll via their college-issued email account.

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

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

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

Withdrawing from Courses

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

To withdraw from a course students need to log into their eWOLF account or Navigate. Our main part of term withdraw deadlines are published at https://www.frontrange.edu/deadlines. You can also view the withdraw deadline for your course(s) each semester in your course syllabus or your course schedule. Students are strongly encouraged to meet with their Pathways Advisor and a financial aid advisor prior to withdrawing from a course or courses. Student veterans, students enrolled through Concurrent Enrollment, and International students must meet with their advisor prior to withdrawing.

Withdrawal Appeal for Extenuating Circumstances:

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

- Students must submit a completed *appeal* form with supporting documentation after the semester ends, and within 1 year of the semester for which they are appealing. The form can be found in eWOLF in the Student Resources pull down menu - Student Forms.
- Students must document the extenuating circumstance. Please note that a change in employment or work hours does not constitute an extenuating circumstance. Extenuating circumstances can include but are not limited to extended and unexpected illness, accidents, natural disasters, and unexpected requirements for military personnel and emergency management officials during an academic term. Documentation of the extenuating circumstance must be received within 30 days of submitting the appeal. Appeals submitted without supporting documentation will be denied.
- All appeals for medical circumstances must be accompanied by the Front Range Community College Medical form only. Other forms of medical documentation will not be accepted.
- Repeated appeals for the same reason will not be considered.
- Completed *appeal* forms will be reviewed by a committee and the student will be notified by their college-issued email of the committee's decision.
- The decision made by the committee is final.
- If approved, the Extenuating Circumstances Appeals Committee may award a withdraw. A grade of "WX or WD" is recorded on the transcript depending on the decision of the committee. This does not impact a student's GPA, but may impact a student's academic progress as it pertains to degree or certificate completion rate and awarding of financial aid. A withdrawal will also affect a student's enrollment status, as it will not count toward the total number of credits enrolled in a semester.
  Note to Financial Aid Students: Making changes to your schedule and courses may have Financial Aid implications. If you drop or withdraw from classes, you may owe some or all of the funds you have received. It is advised that students meet with a Financial Aid Advisor prior to submitting the appeal to discuss the impact of this withdrawal. **An appeal will not dismiss any prior balances owed and cannot guarantee avoidance of state collections for past due amounts.**

Learning Options

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

Flexible Learning

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

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

Online Learning Courses cover the same material as regular classroom courses. Specially prepared instructors use online course sites to build an online community of learners. Internet access and computer literacy are required. For more information about **FRCC Online courses**, including how to set up your computer for online courses, go to www.frontrange.edu/online. FRCC students may also enroll in online courses offered by the Colorado Community College System. **CCCOnline courses** are taught by instructors across the Colorado Community College System and appear as FRCC credit on your transcript. Internet access and computer literacy are required. For more information about CCCOnline courses, go to www.ccconline.org.

Start 2 and **Start 3 Courses** offer fast-paced, intensive learning options for motivated students. These courses have a start date later in the semester than traditional courses. For both, the same amount of content is covered over a shorter period of time.

Evening and **Weekend Courses**, like traditional classroom instruction, include lecture, small group discussion, labs, field trips, and other in-person and online delivery methods.

Learning Communities are designed to enhance student learning by pairing two courses. Two professors guide the learning by integrating assignments. Both classes are enrolled with the same small group of students and are scheduled back-to-back.

Support Services

FRCC provides a wide range of services to help you reach your academic, career, and personal goals. These services include: advising & counseling, campus stores, campus safety & security, disability services, fitness centers, campus dining, job search & internships, learning support services, libraries, student involvement opportunities, support for students of concern, testing centers, academic assistance, student centers, and veteran support services.

Student Rights, Responsibilities & Code of Conduct

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

Student Bill of Rights

The Student Bill of Rights 23-1-125. Commission directive, student bill of rights, degree requirements, implementation of core courses, competency test, prior learning.

Student Bill of Rights. The general assembly hereby finds that students enrolled in public institutions of higher education shall have the following rights:

- 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 can sign a two-year or four-year graduation agreement that formalizes a plan for the student to obtain a degree in two or four years, unless there are additional degree requirements recognized by the commission.
- Students have a right to clear and concise information concerning which courses must be completed successfully to complete their degrees.
- Students have a right to know which courses are transferable among the state's public two-year and four-year institutions of higher education.
- Students, upon completion of core general education courses, regardless of the delivery method, should have those courses satisfy the core course requirements of all Colorado public institutions of higher education.
- Students have a right to know if courses from one or more public higher education institutions satisfy the students' degree requirements.
- A student's credit for the completion of the core requirements and core courses shall not expire for 10 years from the date of initial enrollment and shall be transferable.

Academic Integrity

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

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

- Students must do their own work and submit only their own work on examinations, reports and projects, unless otherwise permitted by the instructor.

- Students are encouraged to contact their instructor about appropriate citation guidelines.

- Students may benefit from working in groups. However, students must not collaborate or cooperate with others on graded assignments, examinations, or other academic exercises unless clearly directed to do so by the instructor.

- Students must follow all written and/or verbal instructions given by instructors or designated college representatives prior to taking examinations, placement assessments, tests, quizzes and evaluations.

- Students are responsible for adhering to course requirements as specified by the instructor in the course syllabus.

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

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

Plagiarism is the adoption or reproduction of ideas, words, or statements of another person as one's own without proper citation or acknowledgment. When a student submits work that they claim to be their original work, but actually is not, the student has committed plagiarism. Plagiarism includes the following: copying of one person's work by another and claiming it as his or her own; false presentation of one's self as the author or creator of a work; falsely taking credit for another person's unique method of treatment or expression; falsely representing one's self as the source of ideas or expression; or the presentation of someone else's language, ideas, or works without giving that person due credit.

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

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

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

Alcohol and Drug Use Policy

In compliance with the Drug-Free Schools and Communities Act Amendment, FRCC has strict rules against students or employees using, being under the influence of, manufacturing, distributing, dispensing, possessing, cultivating, purchasing or selling alcohol or illicit drugs on college property or during college activities. Any student or employee convicted of any such drug violation is subject to criminal penalties under local, state, and federal law, as well as disciplinary action by the college. These penalties can range in severity from a fine of $100 or less, to $8 million and/or life imprisonment. The exact penalty assessed depends upon the nature and severity of the individual offense. Federal and state laws govern the use and possession of controlled substances.

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

Drug and alcohol violations are prohibited under the Student Behavioral Expectations & Responsibilities Resolution Procedure (p. 155). Students who violate the CCCS Student Code of Conduct will be subject to college Disciplinary Procedures (p. 155). Sanctions, include but are not limited to, warnings, probation, suspension or expulsion from the college, termination of employment and referral to authorities for prosecution, as appropriate.

Alcohol and Drug Related Programs on Campus

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

Health Risks of Alcohol and Drug Use

Alcohol

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

- Hangovers. Headaches, nausea, vomiting, aches and pains all result from drinking too much. Drinking to the point of drunkenness makes you sick.
- Weight gain. Alcohol is not water. A beer has about 150 "empty" calories that provide few if any nutrients.

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

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

Drugs

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

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

Resources for Students and Employees

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

http://drugabuse.com

Westminster/Denver
www.uch.edu/conditions/addictions

Boulder/Longmont

https://www.bouldercounty.org/families/addiction/

Fort Collins
https://www.summitstonehealth.org/

Animals on Campus

Except for service dogs for people with disabilities or those dogs being trained to work with people with disabilities, animals being used by an instructor for educational purposes, and K-9 police units, animals are not allowed on campus. At no time should animals be left in vehicles. Animals on campus should be reported to Campus Security and/or the local Animal Control authority.

Attendance

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

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

College Records

It is the responsibility of each student to:

- Present a valid picture ID when conducting any service related transactions, including but not limited to financial aid inquiries, registration transactions, transcript releases and requests, cashier transactions, testing services, release of any part of the student record as defined by FERPA, or issuance of a college ID card.

- Update your record with address, phone number, and other contact information.

- Submit legal documentation for any name change. This documentation may include a marriage certificate, a divorce decree, valid Colorado Driver's License or a court order.

Report Your Concern

If you or someone you know has a problem with drugs, alcohol, cheating, stealing, sexual harassment, etc., don't worry in

silence. Tell someone. You don't have to know all the facts. You don't have to give your name. And you don't have to fear any consequences. We're here to help.

Visit http://www.frontrange.edu/being-a-student/campus-safety for support and guidance today.

HEOA Peer to Peer File Sharing Requirements and Digital Millennium Copyright Act

Purpose: H.R. 4137, the Higher Education Opportunity Act (HEOA), is a reauthorization of the Higher Education Act. It includes provisions that are designed to reduce the illegal uploading and downloading of copyrighted works through peer-to-peer (P2P) sharing. This Guideline outlines FRCC's plan to comply with these requirements.

Scope: All members of the FRCC Community including students, faculty and staff are subject to the terms and conditions of this Guideline.

Guideline

A. HEOA has stipulated a number of provisions designed to reduce the illegal uploading and downloading of copyrighted works through peer-to-peer (P2P) file sharing. These provisions include requirements that:

1. Institutions make an annual disclosure that informs students that the illegal distribution of copyrighted materials may subject them to criminal and civil penalties and describes the steps that institutions will take to detect and punish illegal distribution of copyrighted materials.

2. Institutions certify to the Secretary of Education that they have developed a plan to "effectively combat" the unauthorized distribution of copyrighted material. The plan must include the use of technology-based deterrents.

3. Institutions, "to the extent practicable," offer alternatives to illegal file sharing.

4. Institutions identify procedures for periodically reviewing the effectiveness of the plans to combat the unauthorized distribution of copyrighted materials.

B. Annual Disclosure

Consistent with our educational principles, we view education as the most important element in combating illegal sharing of copyrighted materials at FRCC. We use a wide variety of methods to inform our community about the law and FRCC's response to copyright infringement claims:

1. In order to use college computing resources, all members of the FRCC Community must comply with the CCCS Policy SP3-125f.

2. FRCC's Compliance with HEOA Peer-to-Peer File Sharing Guidelines is published annually by the Registrar in the College catalog. Published information includes links to alternative downloading sites.

3. Each year, FRCC sends out an email to all students, faculty and staff regarding illegal distribution of copyrighted materials and the importance of adhering to appropriate copyright laws.

4. Computing support staff is regularly trained on the College position with respect to copyright issues.

C. Plan

1. FRCC utilizes Audible Magic's CopySense Compliance Service, employing the CopySense Appliance to provide network-based peer-to-peer content identification and graduated response services to identify unauthorized distribution of copyrighted works. The solution:

a. Identifies unauthorized distribution of copyrighted works;

b. Allows legitimate P2P (Peer-to-Peer) activity to continue unfettered;

c. Provides real-time detection and communication with students to help build better digital citizens;

d. Provides a warning message with legal alternatives when it detects illegal downloading.

2. The network appliance and servers hosted at Audible Magic facilities are used to detect unauthorized distribution of copyrighted works. Audible Magic's patented fingerprint technology uses metadata filters and/or uniform file identifiers of previously identified copyrighted content for detection.

3. Audible Magic manages and maintains a global registry of fingerprints of copyrighted works, which are used to match content shared over peer-to-peer file sharing. Audible Magic works with copyright owners to submit fingerprints of copyrighted content for inclusion in the global registry.

4. The network appliance includes a dashboard to administer FRCC's graduated response rules and use policies.

5. Audible Magic hosts a graduated response website for customer configuration of the graduated response system.

D. Violations of Guidelines

Copyright violations on FRCC networks will result in: 1) unsuccessful download of material; 2) warning message; 3) education about legal alternatives; and 4) loss of internet access.

1. First offense:

a. The user will be required to review FRCC's HEOA Peer-to-Peer File Sharing Guidelines, which will be presented in a pop-up window on the computer screen;

b. The user will be required to acknowledge that he/she will adhere to the guidelines and the Digital Millenium Copyright Act (DMCA) by selecting the "I Will Comply" button in the pop-up window; and,

c. Internet access to the offending device will be suspended for 15 minutes.

2. Subsequent offenses:

a. The user will have his/her network access immediately suspended, and a message will advise the user to contact Information Technology Services (ITS) in person;

b. The violator will need to appear in person, and identify himself/herself to a permanent ITS representative (not a student worker);

c. The ITS Helpdesk will initiate an incident report, which identifies the student;

d. The ITS Helpdesk will identify the specific activity that triggered the violation and include this information in the incident report;

e. The ITS Helpdesk will send the incident report to the campus Dean of Student Services;

f. The office of the Dean of Student Services will inform the ITS Helpdesk when internet access can be restored;

g. The Dean of Student Services will pursue disciplinary action if more than one such incident report is created for the same student, or if the specific activity that triggered the violation warrants disciplinary action.

E. Offering Alternatives to Illegal File Sharing

1. When illegal downloading is detected by the CopySense appliance, a warning message with legal alternatives to illegal downloading is presented to the offender.

2. In addition, FRCC publishes links to a website which describes legal alternatives for downloading copyrighted materials (http://www.educause.edu/legalcontent).

F. Reviewing Effectiveness

1. At the end of each fiscal year, the Director of Information Technology will review the DMCA cases and the plan. The plan and policies will then be reviewed to strengthen any gaps or areas of concern.

2. The Director of Financial Aid annually certifies, by virtue of submitting the FRCC federal student financial aid report, that FRCC is meeting its obligations with regard to illegal file sharing.

Computer Use Procedure and Electronic Communication Policy

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

The Computer Use Procedure contains the governing philosophy for regulating faculty, student, and staff use of the System's computing resources. It spells out the general principles regarding appropriate use of equipment, software, networks and data. In addition to this policy all members of the CCCS community are also bound by local, state, and federal laws relating to copyrights, security, and other statutes regarding electronic media. The CCCS has the right to monitor any and all aspects of its computer and telecommunications systems including employee email, voice mail, and file structures on any CCCS system. CCCS's right to monitor its computer system and telecommunications equipment includes, but is not limited to, monitoring sites users visit on the internet, monitoring chat groups and newsgroups, reviewing material downloaded or uploaded by users, and reviewing email sent and received by users.

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

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

To read the Computer Use Procedure and Electronic Communication Policy in full, go to https://cccs.edu/policies-and-procedures/board-policies/bp-3-125-electronic-communication-policy/

P2P file sharing can violate copyright laws

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

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

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

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

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

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

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

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

Student Email

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

Acceptable Use

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

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

- Fraudulent, harassing, threatening or libelous messages and inclusion of personal or sensitive information about individuals without their consent

- Junk mail (e.g. random mail, chain letters, etc.,)

- Distributing unsolicited advertising

- Obscene, profane, abusive, defamatory, derogatory, threatening, or sexually explicit language or graphic representation

- Statements or graphic representations that may be construed as discriminatory or offensive by reference to race, national origin, gender, religion, age, disability, sexual orientation, or other legally protected criteria

- Propagation of computer worms or viruses

- Commercial activities and other activities conducted for personal gain

- Religious causes

- Solicitations not approved by the System

- Political fundraising or lobbying

- Violating any federal, state, or local law/regulation, or System policy/procedure

Email Harassment

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

Consequences for Violation

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

Monitoring

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

Student Rights & Freedoms

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

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

Freedom in the classroom, including the right to:

- Ask questions, discuss any views, provided such activity does not infringe on the rights of others.

- Expect professional conduct from faculty.

- Be informed of the academic standards expected in each course.

- Be evaluated solely on the basis of academic performance.

- Privacy in regard to personal or scholastic information.

- Have access to faculty members during their posted office hours.

- Receive reasonable academic assistance from the institution.

Freedom on campus, including the right to:

- Be free from harassment or discrimination based on race, national origin, gender, religion, disability, age, or sexual orientation.

- Expect an environment free of drug and alcohol abuse.

- Discuss and express in an orderly way any view in support of any cause, while not disrupting college operations or infringing on the rights of others.

- Dress in any way that personal taste dictates and that does not interfere with the educational process or with health and safety requirements.

- Expect that possessions not be opened or searched without consent or unless probable cause exists or under urgent circumstances.

- Be informed of institutional procedures and other expectations.

- Have access to services without unreasonable delays.

- Expect professional conduct from college employees.

Freedom in student affairs, including the right to:

- Have a student government.

- Organize and join campus clubs for educational, political, social, religious or cultural purposes. The function and structure of student clubs is determined by the FRCC club -guidelines.

- Use meeting rooms and other campus facilities, as well as bulletin boards, throughout the campus in compliance with college policies and procedures.

- Expect compliance with college contractual agreements.

- Assemble, select speakers and guests, discuss issues of choice, and have the same rights as other citizens to hear differing points of view and to draw conclusions.

- Distribute written materials on campus in a manner consistent with other rights and freedoms, after obtaining the prior approval required of any individual or organization (please contact Student Services).

Freedom in academic affairs, including the right to:

- Serve as members of committees that study such issues as: course scheduling, the instructional calendar, library policy and development, grading systems, course and curriculum development, search committees, and standards and procedures for student discipline.

- Appeal academic decisions regarding completion of program, graduation requirements, academic dismissal from a program, or final grades.

Freedom to grieve, including the right to:

- Use grievance procedures and to seek redress when they believe that either their rights or their freedoms have been violated. See the college catalog or your campus Dean of Student Affairs for grievance procedures.

Student Behavioral Expectations & Responsibilities Resolution Procedure

Application

This procedure applies to students within the Colorado Community College System, including its Colleges (CCCS or System). This procedure applies to violations of the Code of Student Behavioral Expectations and Responsibilities (Code) (Appendix A).

Basis

If a student is alleged to have violated the Code, this procedure outlines the steps that can be taken in resolving the matter. Students reported to have violated the Code be given the opportunity to participate in the behavioral expectations and responsibilities process. The procedure aims to engage students in a restorative, fair, educational, and developmental process, and to prevent future occurrences of student misconduct.

Definitions

For definitions applicable to this procedure, refer to Appendix B.

Jurisdiction

This procedure applies to behaviors from students that take place on a CCCS campus, at CCCS sponsored events, and may also apply to off-campus and to online behavior when the Senior Student Affairs Officer (SSAO) or designee determines that the off-campus or online behavior affects a substantial CCCS interest. A substantial CCCS or College interest includes, but is not limited to the following, when the circumstances are such that there is a disruption to CCCS or College operations, a significant negative impact to the campus community, or a detriment to the educational interests of the System or College:

- Any action that constitutes criminal offense as defined by federal or Colorado law. This includes, but is not limited to, single or repeat violations of any local, state, or federal law committed in the municipality where the System or the College is located;
- Any situation where it appears that the accused individual may present a danger or threat to the health or safety of self or others; and/or
- Any situation that significantly impinges upon the rights, property, or achievements of self or others or significantly breaches the peace and/or causes social disorder.

Any online postings or other electronic communication by students, including cyber-bullying, cyber-stalking, cyber-harassment, etc., occurring completely outside of the System or the College's control (e.g., not on System or College networks, websites or between System or College email accounts) will only be subject to this procedure when those online behaviors can be shown to cause a substantial on-campus disruption. Otherwise, such communications are considered speech protected by the First Amendment to the Constitution.

Equity Statement

The Colorado Community College System is committed to a procedure of equity and justice. We accept the responsibility to create an environment free from discrimination.

Procedure

Initiating a Conduct Process

Any member of the System community may allege a violation by any student of the Code by reporting the matter to the appropriate SSAO. The SSAO manages reports of Code violations made under this procedure and may delegate this responsibility. Students, faculty, instructors, staff, authorized volunteers, and guests are encouraged to report behavior that potentially violates the Code or that may be criminal in nature. Formal reports can be made by completing a College incident report. If the conduct is believed to be criminal in nature, the SSAO should immediately report the alleged violation to campus law enforcement or security or external law enforcement.

There is no time limit on reporting violations of the Code; however, the longer someone waits to report, the harder it becomes for College officials to obtain information and witness statements and to make determinations regarding alleged violations. Anonymous complaints are permitted, though doing so may limit the College's ability to investigate and respond to a complaint effectively.

Complaints, concerns, or reports without reasonable cause will not be pursued. Upon receipt of the report, the SSAO or designee shall review the matter to determine if it alleges sufficient information to support reasonable cause that a violation has occurred. If so, the SSAO shall promptly notify the

Complainant (if any) and the Respondent in writing of the allegations and any interim action that is being imposed. Should a student withdraw from the institution prior to the conclusion of the conduct process, the College will proceed with or without the student's involvement.

The SSAO will identify a conduct resolution pathway as outlined below based on the nature of the allegations and input from the involved parties. Decisions made by the SSAO shall be final unless subject to appeal. Any outcomes and restrictions imposed take effect immediately unless the SSAO agrees to delay or stay the outcome.

Proceedings initiated under this procedure are separate from civil or criminal proceedings that may relate to the same incident. Investigations or conduct proceedings by the College are not postponed while criminal or civil proceedings are pending unless otherwise determined by the SSAO.

Interim Actions

The SSAO, in consultation with appropriate administrative personnel, may implement interim actions intended to protect the safety and well-being of the CCCS community; preserve CCCS property; address the effects of the reported behavior; and prevent further violations while the matter is under review or investigation. Interim actions may include, but are not limited to:

1. *Interim No Trespass:* The SSAO may issue a "Cease Communications," "No Contact," and/or "No Trespass," directive, also referred to as a *persona non*
2. *Interim Suspension:* This interim suspension includes attending classes and events pending a final outcome. This interim suspension begins immediately upon notice from the SSAO. In cases where a student is banned from campus on an interim basis, they will be subject to immediate arrest for trespass if they are on campus until the exclusion has been lifted. A meeting with an SSAO is then scheduled as soon as possible to determine the appropriate conduct resolution pathway.
3. Any other outcome listed in this procedure below may also be imposed on an interim basis.

In all cases in which an interim action is imposed, the individual will be given the opportunity to meet with the SSAO prior to such action being imposed, or as soon thereafter as reasonably possible, to show cause why the interim action should not be implemented. The SSAO shall have sole discretion to implement or stay an interim action, and to determine its conditions and duration. Violation of an interim action may be grounds for imposition of an outcome, up to and including expulsion.

Conduct Resolution Pathways

Alternative Conflict Resolution

The SSAO, in consultation with the involved parties, may determine informally resolving student conduct matters through an alternative conflict resolution process is appropriate to resolve the reported concerns. The primary focus during alternative conflict resolution remains the welfare of the parties and the safety of the CCCS community, but it does not involve a formal investigation.

Alternative conflict resolution, includes, but is not limited to, dialogue, conflict coaching, mediation, restorative justice, or shuttle diplomacy. Alternative conflict resolution works best when students take responsibility for their actions, have a desire to restore the impact created in the incident, and actively participate in deciding and agreeing upon an outcome. If a resolution is reached, the matter will be closed without opportunity for an appeal.

At any time during the alternative conflict resolution process, the SSAO may elect to initiate formal investigation as deemed appropriate to resolve the matter. The parties can elect to cease the alternative conflict resolution process at any time before it concludes and proceed with a formal investigation.

Formal Investigation

Where formal investigation is designated, the SSAO shall investigate the allegations, provide the Respondent an opportunity to be heard, and render a decision as outlined below:

1. Investigation: The SSAO shall provide the Respondent an opportunity to respond to the allegations either by meeting with the SSAO to discuss the allegations or by submitting a written response, or both. The Respondent will have the opportunity to be advised by a personal advisor of their choice, at their expense, at any stage of the process and to be accompanied by that advisor at any meeting. An advisor may only consult and advise their advisee, but not speak for the advisee at any meeting or hearing. The SSAO may remove or dismiss an advisor who becomes disruptive or who does not abide by the restrictions on their participation.

The SSAO may also conduct any other investigation, such as meeting with the Complainant (if any), meeting with other relevant witnesses, and evaluating relevant documents, information, and evidence

2. Decision: Once the investigation is complete, the SSAO shall render a decision as to whether a violation of the Code has occurred. The determination shall be based on the preponderance of evidence standard: *whether it is more likely than not* that the student violated the Code. The decision shall address whether alleged conduct occurred; whether and how the conduct violated the Code; and impose an outcome, if appropriate.

3. Notification of the decision in writing will be provided by the SSAO to the Respondent and any other involved parties, as appropriate. The decision will include information regarding the applicable appeals process. The decision is part of the student's educational record.

Outcomes

The following outcomes can be implemented by the SSAO as a result of finding a violation in the formal investigation process or as part of an agreed upon alternative conflict resolution. These outcomes are intended to develop an educational and restorative experience for individuals engaging with the conduct process. These outcomes may also be put in place to ensure safety of the individual and/or the CCCS community. Outcomes will be effective immediately upon notice to the student, except that the SSAO may delay or stay the effective date, in their discretion, upon request from the student (e.g., it may be appropriate to stay an outcome pending the resolution of an appeal).

1. Loss of Privileges: The student will be denied specified privileges for a designated period of time, from one to three semesters or one academic year.

2. Building/Access Restriction: The student will be denied access to specific campus locations, from one to three semesters or one academic year.

3. Restriction on Visitation Privileges: Restrictions that may be imposed on a residence hall student or non-residence hall student. The parameters of the restriction will be specified.

4. Eligibility Restriction: The student is deemed "not in good standing" with the College for a specified period of time, from one to three semesters or one academic year. Specific limitations or exceptions may be granted by the SSAO, and terms of this outcome may include, but are not limited to, the following:

- Ineligibility to hold any office in any student organization recognized by the College or maintain an elected or appointed office at the College.

- Ineligibility to represent the College in any way, including, but not limited to participating in the study abroad program, attending meetings, or representing the College at an official CCCS function, event, or intercollegiate competition as a player, manager, or student coach, etc.

5. No Contact Orders: If a "no contact" order is issued, it is the responsibility of the student not to have any contact with the individual(s) named in the order, directly or through third parties, or electronically/online until the order is officially removed by the SSAO.

6. College Housing Reassignment: Reassignment to another College housing facility.

7. Restitution: Compensation for damage caused to the College or any individual's property. This could also include situations such as failure to return a reserved space to proper condition, including labor costs and expenses. This is not a fine but, rather, a repayment for labor costs and/or the value of property destroyed, damaged, consumed, or stolen.

8. Referral for Treatment/Assessment: These include, but are not limited to, alcohol or drug education programs, anger management, or other relevant assessment and treatment programs. Some outcomes may include a cost or fee.

9. College/Community Service Requirements: Completion of a specific supervised College/Community service.

10. Confiscation of Prohibited Property: Items whose presence is in violation of College policy (pipes, bongs, weapons, etc.) will be confiscated. Prohibited items may be handled, disposed of, or returned to the owner at the discretion of the SSAO.

11. Educational Program/Project: Requirement to complete an educational or reflection project designed to support students in their understanding of the overall impact of their behavior, or a requirement to attend, present, and/or participate in a program related to the violation. It may also be a requirement to sponsor or assist with a program for others on campus to aid them in learning about the violation for which the student was found responsible. Audience may be restricted.

12. Warning: An official notice that misconduct has occurred and/or that future specific behavior could result in more severe restrictions, conditions, and outcomes.

13. Probation: A period of time in which the privilege of continuing as a student is conditioned upon meeting certain requirements. Any violation or failure to comply with restrictions while on probationary status could be escalated for further outcomes, including removal from CCCS. Additionally, students on probationary status typically will be required to meet with SSAO or other College personnel for follow up meetings. Probationary status may range from one semester up to duration of time at CCCS.

14. Suspension: Separation from a College for a specified minimum period of time, after which the student is eligible to petition the SSAO for permission to return. Eligibility for return may be contingent upon satisfaction of specific conditions. The student is required to vacate the campus immediately upon receipt of notification of a suspension. During the suspension period, the student is restricted from College property, functions, events, and activities without prior written approval from the SSAO. Additionally, students may be suspended from one class period per incident by the responsible faculty member or instructor without triggering this procedure. Any longer suspension must be referred to the SSAO.

15. Expulsion: Permanent separation from CCCS. The student is banned from CCCS College properties and the student's presence at any CCCS-sponsored activity or event is prohibited. This action may be enforced with a trespass action as necessary.

16. No Trespass: The College may issue a "No Trespass" directive, also referred to as a persona non

17. Other: Additional or alternate restrictions, conditions, or outcomes that promote reflection and holistic student development (e.g., creative expression, community restoration project) may be created and designed as deemed appropriate to the violation.

Appeal of Formal Investigation Decision

A student found responsible for violating the Code through the formal investigation process has a right to appeal if suspension or expulsion are imposed.

If an outcome other than suspension or expulsion is imposed as a result of a formal investigation, a student may request in writing a discretionary appeal to the designated Appellate officer. A request for a discretionary appeal must be in writing and submitted to the Appellate officer within five (5) business days of the notice of decision. The Appellate Officer must notify the student in writing of whether the appeal will be permitted and if permitted, the below appeal deadlines apply from the date of that decision.

All appeals must be made in accordance with procedures outlined in this section.

1. Important Information about Appeals:

- The appeal is the final step in the conduct process.

- An appeal does not provide a second meeting or review of the case. The appeal process will be based on the existing record and the appeal criteria.

- Situations may occur that shift the time frame of the appeal process. Considerations will be given for extenuating circumstances, including but not limited to, College holidays, family crisis, trauma, and medical/non-medical emergencies. Any extensions are made at the discretion of the SSAO.

- Students are encouraged to consult with the SSAO and external resources about the appeal process prior to submitting the request for an appeal.

2. Appeals Criteria:

A student may only appeal upon one or more of the following grounds:

- A material procedural error occurred that significantly impacted the outcome of the factual findings, outcomes, or both (e.g., substantiated bias, conflict of interest, or material deviation from established procedures).

- There is new information, unavailable during the formal investigation that could substantially impact the decision or the outcome. The new information must be included with the student's request for appeal and the student must show that the new information was not known to them at the time of investigation. Failure to participate in the initial investigation does not constitute new information for the appeal process.

3. Initial Review of Appeal:

Regardless if a case is appealed, all outcomes imposed in the case will go into effect immediately unless they are officially stayed pending the appeal decision.

Appeals must be filed in writing within ten (10) business days of the notice of the initial conduct decision or decision allowing discretionary appeal. A student may file a written appeal by completing and submitting the College's appeal form, if applicable, and sending it to the Appellate Officer. It is the student's obligation to provide any and all materials for consideration at the time of appeal submission. Subsequent information and/or revisions to the appeal after initial submission will not be accepted.

Upon receipt of an appeal, the Appellate Officer shall conduct an initial review to determine if the appeal meets the limited appeals criteria and is timely. The student will receive notification about the decision of the initial review of appeal within five (5) business days of receipt of the student's appeal. If the appeal is found to meet these criteria, the Appellate Officer shall give written notice to other involved parties, if applicable, to allow the other parties an opportunity to provide a response to the appeal.

4. Appeal Determination:

If it is determined an appeal meets the appeal criteria, the Appellate Officer will review the appeal.

In reviewing the appeal, the Appellate Officer may only consider the information contained in the record of the case, but may seek clarification of the decision rendered by the SSAO.

Upon review of an appeal, the Appellate Officer shall have the authority to:

- Deny the appeal and affirm the initial decision and outcomes.
- Find that a material procedural error occurred (g., substantiated bias, material deviation from established procedures) that impacted the outcome and refer the case back to the SSAO or an alternate designee with instructions to reconvene the investigation and/or the Appellate Officer may otherwise correct the procedural error.
- Find that the student has presented new information that is material to the decision or outcome of the case. Upon this finding, the Appellate Officer shall conduct or request appropriate additional steps (such as requesting additional investigation by the SSAO) and/or modify the decision and outcome accordingly.

The Appellate Officer will notify the student in writing of the decision, typically within ten (10) business days of completing the review.

During this appeal process, if the Appellate Officer requires additional time, they shall promptly notify the parties.

Student Records

Student conduct records will be maintained in accordance with the Family Educational Rights and Privacy Act (FERPA) and SP 4-80a, Student Educational Records and Directory Information. Generally, student conduct records are sealed seven (7) years after a final decision is delivered in the resolution process, except as required by law. Student conduct records may be sealed earlier by the SSAO upon written request from the student. Conduct records that result in a separation from the College (suspension or expulsion) and those that fall under Civil Rights, to include a Title IX investigation, will be maintained for seven (7) years.

Financial

Students who are suspended or expelled as a result of the conduct process will not receive a refund of any tuition, fees, or other charges, and will be responsible for any outstanding balances owed to the College. Students who are terminated from housing will be responsible for fulfilling their housing and dining contract fees, if applicable.

Retaliation

It is a violation of this procedure to engage in retaliation, such as taking adverse employment or educational action, against any person who reports an incident of a Code violation or because of the person's participation, or perceived participation, in any aspect of this procedure. Retaliation includes acts to intimidate, threaten, coerce, or discriminate against any individual for the purposes of interfering with any right or privilege provided by this procedure.

Revising this Procedure

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

APPENDIX A - Code of Student Behavioral Expectations & Responsibilities (Code)

Statement

A College community is defined by its values for learning, teaching, and service that reflect academic excellence, holistic student development, and societal impact. To guide student success, the Colorado Community College System (CCCS) has created the Code of Student Behavioral Expectations and Responsibilities (Code), which includes standards of behavior that support an engaged learning environment for all students. The Code embraces the institutional values of integrity, excellence, learning, diversity, intellectual freedom, and equal opportunity, and is rooted in conflict resolution practice to support students in resolving their own conflicts.

Each College's Student Affairs Division is authorized to enact the Code and utilize the Code procedures to support students while holding them accountable to the behavior that supports the College mission and vision. The outcomes of the student conduct

process are designed to assist students in their development, help them think through their moral and ethical decision-making, and realign their behavior with the College's community expectations. In certain incidents, this may involve separation from the College either temporarily or permanently.

Outcomes are assigned based on the severity of the violation, cumulative conduct history, and educational needs of the student.

Students at each College are provided a copy of the Code and are responsible for reading and adhering to the Code. The Code in no way creates a contractual obligation and CCCS reserves the right to revise the procedure at any time.

Code

The College considers the behavior described in the following subsections as inappropriate and in opposition to the values of the College community. These responsibilities apply to all students including continuing education. The College encourages and expects students, faculty, and staff to engage as active bystanders and report to College officials incidents that involve the following behaviors. Any student found to have violated or to have attempted to violate the following responsibilities may be subject to the conditions, restrictions, and outcomes outlined in SP 4-30a, Student Behavior Expectations and Responsibilities Resolution Procedure.

The following section is organized alphabetically by violation followed by an explanation.

Abuse of Conduct Process: Abuse or interference with College processes, including conduct and academic integrity meetings:

- Falsification, distortion, or misrepresentation of information.
- Failure to provide, destroying, or concealing information during an investigation of an alleged Code violation.
- Attempting to discourage an individual's proper participation in, or use of, the campus conduct system.
- Inappropriately influencing any member of the campus community with conduct authority prior to, during, and/or following a campus conduct proceeding.
- Influencing or attempting to influence another individual to commit an abuse of the campus conduct process.

Academic Integrity: Plagiarizing, cheating, or committing any other form of academic misconduct including, but not limited to, unauthorized collaboration, falsification of information, and/or helping someone else violate reasonable standards for academic behavior. Students who engage in any type of academic dishonesty are subject to both academic consequences as determined by the instructor and to outcomes as set forth in the Student Behavioral Expectations and Responsibilities Resolution Procedure.

- Cheating: The act of using or attempting to use an examination or other academic work, material, information, or study aids which are not permitted by the instructor. Cheating includes, but is not limited to:
  - Using books, notes, or calculators or copying from or conversing with others during examinations (unless such external aids are permitted by the instructor).
  - Having someone else do research, write papers, or take examinations for someone else.
  - Submitting work completed in one class to fulfill an assignment in another class without prior approval from the instructor(s).
  - Stealing, distributing, selling, and buying tests or having someone take an exam on someone else's behalf.
- Fabrication: The invention of material or its source and its use as an authority in academic work. Fabrication includes, but is not limited to:
  - Inventing the data for a scientific experiment.
  - Inventing the title and author of a publication in order to use the invented publication as a source.
  - Knowingly attributing material to an incorrect source.
- Plagiarism: The act of using someone else's work without giving proper credit to the original source. The work can be written, artistic, musical, language, symbols, or media. Reusing one's own work without proper citation (or approval of instructor) is also plagiarism.

Alcohol/Drugs: Use, being under the influence, manufacturing, possession, cultivating, distribution, purchase, or sale of alcohol and/or drugs (illegal and/or dangerous or controlled substance) and/or alcohol/drug paraphernalia while on College-owned or College-controlled property, and/or at any function authorized or supervised by the College, and/or in state owned or leased vehicles.

Animals/Pets: Animals are not permitted on campus except as permitted by law or as specifically approved by the College.

- Please see SP 4-120b, regarding Student Disability Services for information related to service animals and emotional support animals.
- Please see the appropriate handbook for regulations and processes for animals and pets in student housing, where applicable.

Bullying/Non-physical abuse: Bullying includes repeated and/or severe aggressive or negative actions or behaviors intentionally or reasonably likely to intimidate, hurt, control, or diminish another person, physically, mentally, or emotionally. Bullying may include direct or indirect communications in verbal or nonverbal form and specifically includes bullying by electronic means (e.g., cyberbullying).

- For more information and compliance, see SP19-10, Bullying/Violence/Firearms on Campus.

Damage and Destruction: Reckless and/or unauthorized damage to, or destruction of, College property or the individual property of another, regardless of intention. Damage or destruction of community, public, or private property.

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

- Collusion: Action with another or others to violate the Code.
- Falsification: Knowingly furnishing or possessing false,

falsified, or forged materials, documents, accounts, records, identification, or financial instruments, including electronic forgery and/or manipulation.

Discrimination and Harassment: Discrimination is any distinction, preference, advantage, or detriment given to a person based on one or more actual or perceived protected classes. Harassment is a form of discrimination that includes Quid Pro Quo and Hostile Environment.

- Hostile Environment occurs when a person is subjected to verbal or physical conduct based on a protected class that is sufficiently severe, persistent or pervasive, and objectively offensive to alter the conditions of a person's employment or unreasonably interfere with a person's ability to participate in or benefit from CCCS educational programs or activities, from both a subjective and objective viewpoint.
- Quid Pro Quo is a type of sexual harassment that exists when an employee conditions the provision of an aid, benefit, or service on an individual's participation in unwelcome sexual conduct, such as unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature.
- Sexual harassment includes, but is not limited to, dating violence, domestic violence, stalking, and sexual assault.
- For more information and how to file a complaint regarding discrimination or harassment, including sexual misconduct, see SP 19-60, Civil Rights and Sexual Misconduct Resolution Process.

Disruptive Behavior: Engaging in any behavior that negatively affects or impedes teaching or learning (regardless of mode of delivery or class setting) or disrupts the general operation of the College.

Endangerment or Defacement: Conduct that is detrimental to the College, and/or to community safety. Examples include, but are not limited to, slamming doors, throwing chairs, and/or defacing of College property or property of others.

Failure to Comply:

- Failure to comply with or follow the lawful directives of College employees acting within the scope of their duties, including those directives issued by a College administrator to ensure the safety and well-being of others.
- Failure to comply with or follow the directives and/or sanctions imposed under CCCS policies and procedures.
- Failure to identify oneself to College officials, acting in their official capacity, when requested to do so.

Fire Safety: Violation of federal, state, local, or campus fire policies including, but not limited to:

- Intentionally, recklessly, or negligently causing a fire that damages the College, individual property, or causes injury.
- Failure to evacuate a College owned, operated, or controlled facility during a fire alarm.
- Improper use of College fire safety equipment.
- Tampering with or improperly engaging a fire alarm or fire detection/control equipment while on College property. Such action may result in a criminal action.

Gambling: Gambling as prohibited by the laws of the State of Colorado. Gambling may include, but is not limited to, raffles, lotteries, sports pools, and online betting activities. Participation in illegal gambling activities on College-owned or College-controlled property, and/or any function authorized or supervised by the College, and/or in state owned or leased vehicles.

Harm to individuals: Intentionally or unintentionally causing physical harm, threatening to cause harm, endangering the health and/or safety of any individual, or demonstrating violent behavior.

- Violent Behavior includes any act or threat of physical, verbal or psychological aggression, or the destruction or abuse of property by any individual.
- A threat is defined as direct or indirect, verbal or non-verbal conduct (including those made in person, by mail, over the telephone, by email, or by other means) intended to result or reasonably resulting in intimidation, harassment, harm, fear or endangerment of the safety of another person or property.
- For more information and compliance, see SP 19-10, Bullying/Violence/Firearms on Campus.

Hazing: Defined as an act that endangers the psychological, emotional, intellectual, and/or physical health and/or safety of a student, or that destroys or removes public or private property, for the purpose of initiation, admission into, affiliation with, or as a condition for continued membership in a group, team, or organization. Additionally, any act that places a student in a subservient role within an organization is considered hazing. Participation or consensual cooperation by the individual(s) being hazed does not excuse the violation. Failing to intervene to prevent, failing to discourage, and failing to report those acts may also violate this code.

Indecent Exposure: Deliberately and publicly exposing one's intimate body parts, public urination, defecation, and public sex acts.

Retaliation: Retaliatory acts include, but are not limited to intimidation, verbal or physical threats, harassment, coercion, or other adverse action(s) against a person who reports an incident of misconduct.

Rioting: Causing, inciting, or participating in any disturbance that presents a clear and present danger to self or others, causes physical harm to others, or results in damage and/or destruction of property.

Theft: Obtaining, retaining or exercising control over property of another without authorization, or by threat or deception, with the purpose and/or effect of depriving the person(s) to whom the property belongs of its use or benefit.

Tobacco Violation: Smoking and the use of tobacco and related products, including electronic smoking, where contrary to applicable laws or policies established by the College. This includes smoking inside buildings or in areas where smoking is posted as prohibited.

Trademark Violation: Unauthorized use, including misuse, of the

College or organizational names and images without the express written consent of the institution or organization.

Unacceptable Use of College Equipment, Network or System:

Unacceptable uses of any College-owned or operated equipment, network or system including, but not limited to: knowingly spreading computer viruses; re-posting personal communications without the author's consent; copying protected materials; using the network for financial or personal gain, commercial activity, or illegal activity; accessing the network using another individual's account; unauthorized downloading/uploading software and/or digital video or music; downloading/uploading, viewing or displaying pornographic content, or any other attempt to compromise network integrity. For more information, see SP 4-32,

Unauthorized Access and Entry: Unauthorized access to any College facility, including misuse of keys, cards, restricted access areas, or unauthorized possession, duplication or use of other individual's means of access to any College facility; failing to provide a timely report of a lost College identification card or key; misuse of access privileges to College premises or unauthorized entry to or use of facilities, including trespassing, propping, or unauthorized use of alarmed doors for entry into or exit from a College facility.

Violation of Laws, Directives and Signage: Violating any municipal, county, state or federal laws, or executive orders, or violating any public health orders in a manner that adversely impacts the health and well-being of the campus environment and those on campus.

Weapons Violation: Possession, use, or distribution of explosives (including fireworks and ammunition), guns (including air, BB, paintball, facsimile weapons, and pellet guns), or other weapons or dangerous objects, such as arrows, axes, machetes, nunchaku, throwing stars, or knives with a blade of longer than three (3) inches. This includes the unauthorized storage of any item that falls within the category of a weapon, including storage in a vehicle parked on College property, other than what is expressly permitted by law.

- Possession of an instrument designed to look like a firearm, explosive, or dangerous weapon is also prohibited by this policy.
- Intentionally or recklessly using and/or possessing a weapon or any other item in such a way that would intimidate, harass, injure, or otherwise interfere with the learning and working environment of the College shall face increased consequences.
- Students, faculty, and staff possessing valid Colorado Concealed Handgun Licenses are permitted to carry concealed on campus in accordance with state law and CCCS policy. For more details about certain restrictions, please consult with the campus/local police and/or the Housing and Residential Education Handbook, where applicable.
- For more information and compliance, see SP 19-10, Bullying/Violence/Firearms on Campus.

Violation of course, program, or activity rules: Violation of established rules as contained in courses, programs activities, regulations, or guidelines and established by departments, regulatory boards, or licensing bodies, including all Housing and Residential Education policies, as applicable.

Group Violations

A student group or organization and its officers and membership may be held collectively and individually responsible when violations of this Code occur by the organization or its member(s), including the following conditions:

- Violation(s) take place at organization-sponsored or co-sponsored events, whether sponsorship is formal or implied.
- Violation(s) have received the consent or encouragement of the organization or of the organization's leaders or officers.
- Violation(s) were known or should have been known to the membership or its officers.

Conduct meetings for student groups or organizations shall also follow the Student Behavioral Expectations and Responsibilities Resolution Procedure. In any such action, individual determinations as to responsibility will be made and restrictions, conditions, and outcomes may be assigned collectively and individually, and will be proportionate to the involvement of each individual and the organization. Procedures will begin with communication to the President or leadership of said organization.

Amnesty

Assisting an individual by calling for help in an alcohol or drug-related emergency means neither the person who calls for help, nor the person who needs help will be subject to formal investigation nor receive a formal conduct record for their behavior. Students seeking assistance under these provisions may be required to meet with the SSAO and to complete educational, counseling, or other requirements aimed at addressing health and safety concerns. The requirements will be informal or on a deferred basis.

The student must fully comply with reporting to appropriate College officials for amnesty to be considered.

APPENDIX B

Definitions

Alternative Conflict Resolution

Alternative conflict resolution is a process of addressing differences that allow everyone involved to find a way to work together. Differences may be personal, financial, employment, political, emotional, or interpersonal. It is an alternative to formal investigation of a reported violation. There are many types of alternative conflict resolutions that may be utilized to work through conflict that may arise. Examples include:

- Dialogue: Students engage in a conversation to gain understanding or to manage a conflict independent of intervention or third-party facilitation.
- Conflict Coaching: Students seek counsel and guidance from the Division of Student Affairs to learn more about their own conflict styles and strategies to engage in conflict in a more effective and independent way.
- Facilitated Dialogue: Students access Division of Student Affairs for facilitation services to engage in a conversation to gain understanding or manage a conflict with another party. In a facilitated dialogue, parties maintain ownership of decisions concerning the conversations or any resolutions of a conflict.

- Mediation: Students access the Division of Student Affairs to serve as a third party to coordinate a structured session aimed at resolving a conflict and/or constructing a resolution agreement for the parties involved.
- Restorative Justice Practices (conferences, circles, and boards): The Division of Student Affairs provides space and facilitation services for students taking ownership for harmful behavior and those parties impacted by the behavior to jointly construct an agreement to restore community.
- Shuttle Diplomacy: A Resolution Coordinator actively negotiates an agreement between two parties who do not wish to directly engage with one another.

Complainant

Complainant is a person who is subject to alleged inappropriate or unlawful behavior. For purposes of this procedure, a Complainant can be a CCCS employee, student, authorized volunteer, guest, or visitor.

Due Process

Due process provides a student reported to be in violation of the Code, a written notice of the allegation of misconduct, time to examine the evidence and formulate a response, and the opportunity to explain their version of events to the SSAO.

Notification

Notification is an email from the SSAO requesting a meeting. The email will be sent to the student's College issued email address and will outline the incident in question, process, and rights of the student.

Outcomes

Outcomes are assigned and used to develop an educational and restorative experience for individuals engaging with the conduct process. Outcomes may also be put in place to ensure the safety of an individual and/or the campus community.

Preponderance of the Evidence

The standard of proof that shows more likely than not that a violation occurred, based on what a reasonable person would consider. This standard is utilized by the SSAO in the formal investigation process.

Reasonable Cause

Reasonable cause is defined as credible information that, if true, supports the proposition that a violation of the Code has occurred, including information provided by an anonymous source.

Reporting Party

Individual(s) who report an incident of concern and possible Code violation. Reporting parties could be students, faculty, staff, law enforcement, or community members.

Respondent

Individual(s) against whom the report was filed.

Resolution Coordinator

A Resolution Coordinator is a College official who is authorized by the SSAO to coordinate conduct resolution.

Senior Student Affairs Officer (SSAO)

The individual designated by the College President to oversee student affairs and be responsible for administering the Code of Student Behavioral Expectations and Responsibilities. The SSAO may delegate some or all aspects of this procedure to another individual (designee/Resolution Coordinator). All references in these procedures to the SSAO include any designee. *Note: Previously referred to as Chief Student Services Officer (CSSO); other policies and procedures may also refer to this role as CSSO.

Student

Anyone who has been admitted within the prior three terms or who has completed a non-credit or academic course within the prior three terms. Withdrawal does not change student status. Students include those currently taking courses at or sponsored by the College(s), pursuing either credit or non-credit courses (or both), including those concurrently attending secondary or post-secondary institutions and College.

Third Party

An individual or group that are external to the incident or situation that are not directly involved.

Student Complaint/Grievance Procedure

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

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

Definitions

Complainant(s) is a person who is subject to alleged inequity as it applies to Board Policies, System President's Procedures, or College Procedures. For purposes of this procedure, a complainant is student who was enrolled at the time of the alleged incident.

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

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

Non- grievable matters : The following matters are not grievable under this procedure except as noted: matters over which the college is without authority to act; grades and other academic decisions unless there is an allegation that the decision was

motivated by discrimination and/or harassment which should be filed under the appropriate Civil Rights Grievance and Investigation Process.

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

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

Day: Refers to calendar day unless otherwise noted below.

Remedy: The relief that the Grievant is requesting.

Filing a Complaint

All complaints shall be made as promptly as possible after the occurrence. A delay in reporting may be reasonable under some circumstances; however, an unreasonable delay in reporting is an appropriate consideration in evaluating the merits of a complaint or report. To file a complaint or grievance go to https://publicdocs.maxient.com/reportingforms.php?FrontRangeCC&layout_id=24

Procedures

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

Informal Grievance Process

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

Formal Grievance Process

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

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

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

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

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

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

In the event of an appeal, the CSSO shall give written notice to the other party to allow him/her the opportunity to submit a response in writing. The CSSO will also draft a response memorandum (also shared with all parties). All appeals and responses are then forwarded to the appeals officer or committee for initial review to determine if the appeal meets the limited grounds and is timely. The original finding will stand if the appeal is not timely or substantively eligible, and the decision is final. If the appeal has standing, the documentation is forwarded for consideration. The party requesting appeal must show error as the original finding is presumed to have been decided reasonably and appropriately. The ONLY grounds for appeal are as follows:

1. A procedural or substantive error occurred that significantly impacted the outcome of the hearing (e.g. substantiated bias, material deviation from established procedures); or
2. To consider new evidence, unavailable during the original hearing or investigation, that could substantially impact the

original finding. A summary of the new evidence and its potential impact must be included in the written appeal.

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

Special Grievance Process Provisions

- In the event that the student is under the age of eighteen or incapacitated, he/she may have an advisor present to assist him/her in presenting his/her case.
- The Parties do not have the right to be represented by legal counsel during these proceedings except in the case where civil or criminal actions concerning the grievance are pending and in that case the legal counsel's role shall be advisory only. The party represented by legal counsel must notify the CSSO forty-eight (48) hours in advance of any scheduled meeting so that the CSSO can notify the other party.
- The student is responsible for presenting his/her own case and, therefore, advisors are not permitted to speak or to participate directly in any hearing except when the student is under the age of eighteen or incapacitated.
- Student shall have the right to identify documents, witnesses and other material he/she would like the CSSO to review before making a final decision.
- Any hearing held shall be conducted in private unless all parties agree otherwise.
- A record of the hearing should be maintained by the CSSO.
- If student has a disability and would like to request an accommodation to assist him/her through the grievance process they may do so by informing the CSSO. The CSSO will then work with disability support services to accommodate the request.
- If the grievance is against the CSSO, the Chief Academic Officer or other person designated by the president shall perform the duties of the CSSO.
- Jurisdiction-college grievance proceedings may be instituted over incidences that occur or are related to college or college-sanctioned activities or was of such a nature to impact upon the college.
- Proceedings under this procedure may be carried out prior to, simultaneously with, or following civil or criminal proceedings off-campus.
- Standard of proof-the college will use the preponderance of evidence standard in the grievance proceedings, meaning, the college will determine whether it is more likely than not the complainant was subjected to inequity as it applies to Board Policies, System President's Procedures, or College procedures.
- False Reports-college will not tolerate intentional false reporting of incidents. False reporting could lead to disciplinary action, up to and including termination for employees, and expulsion for students

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

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

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

Retaliatory Acts

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

Revising this Procedure

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

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

LEGAL NOTICES

Student Services Transaction Identification

For each student services transaction, students are required to verify their identification before any service is provided. Examples of identification can be:

- A series of questions unique to that particular student

- Producing a college identification card

- Producing a high school identification card, or

- Producing some other form of identification that is considered a "secure and verifiable document" which means it must be issued by a state or federal jurisdiction or recognized by the United States Government, and that it is verifiable by federal or state law enforcement, intelligence, or homeland security agencies.

For more information about Student Transaction policies and procedures click here.

Your Right to Know

Current and prospective students at Front Range Community College, have a right to certain information that the college is required by law to provide. Safety related information about crimes and campus security programs are provided on the Campus Safety & Security website or are available in their office. 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. 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.

FRCC is committed to disclosing consumer information you may find helpful. We make every effort to ensure our information is accurate, readily available and can be viewed on our website or requested in person.

Campus Security and Preparedness

The Campus Security and Preparedness department's mission is to provide a safe and secure learning and working environment on Front Range Community College campuses through professional officer presence and professional customer service while leveraging technology.

In compliance with the Crime Awareness and Campus Security Act of 1990, also known as the Jeanne Clery Act, campus crime statistics and information on campus security policies are available to current and potential students through the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics. To view the complete FRCC report go to: Annual Security Report.

Violence Against Women Act (VAWA)

The Violence Against Women Act (VAWA) is a landmark piece of legislation that sought to improve criminal justice and community-based responses to domestic violence, dating violence, sexual assault and stalking in the United States. On March 7, 2013, President Obama reauthorized the Violence Against Women Act, including section 304, which addresses sexual violence in higher education. Victims of domestic violence, dating violence, sexual assault and stalking have been able to access services, and a new generation of families and justice system professionals have come to understand that domestic violence, dating violence, sexual assault and stalking are crimes that our society will not tolerate.

Front Range Community College embraces the tenants of VAWA and supports VAWA through the education and training of our campus communities by providing a supportive educational environment and victim resources. Front Range Community College prohibits the offenses of domestic violence, dating violence, sexual assault and stalking and reaffirms its commitment to maintain a campus environment emphasizing the dignity and worth of all members of the College community. The college utilizes Colorado law to define consent, provides bystander training and warning signs of abusive behavior and promotes safety strategies. FRCC offers VAWA education through mandatory employee training, as well as additional presentations, in person training, open forums and VAWA related displays throughout the academic year.

For more information about the Clery Act and VAWA, please contact the Campus Security and Preparedness Department, the Dean of Student Affairs, or the Title IX Office in Human Resources at 303-678-3707.

Family Education Rights and Privacy

FRCC 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 the 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 Office of the Registrar, 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 Office of the Registrar, they shall advise the student of the correct official to whom the request should be addressed.

2) The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights. A student who wishes to ask Front Range Community College to amend a record should write the Registrar who will notify the college official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If the College decides not to amend the record as requested, the College will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment using the Student Grievance Procedure SP 4-31. 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 or 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 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. Front Range Community College has designated the National Student Clearinghouse as a College official. 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, or after enrollment.

The college may share educational records to 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 schools 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.

FERPA Annual Notice to Reflect Possible Federal and State Data Collection and Use. As of January 3, 2012, the U.S. Department of Education's FERPA regulations expand the circumstances under which your education records and personally identifiable information (PII) contained in such records — including your Social Security Number, grades, or other private information — may be accessed without your consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or state and local education authorities ("Federal and State Authorities") may allow access to your records and PII without your consent to any third party designated by a Federal or State Authority to evaluate a federal- or state-supported education program. The evaluation may relate to any program that is "principally engaged in the provision of education," such as early childhood education and job training, as well as any program that is administered by an education agency or institution. Second, Federal and State Authorities may allow access to your education records and PII without your consent to researchers performing certain types of studies, in certain cases even when we object to or do not request such research. Federal and State Authorities must obtain certain use-restriction and data security promises from the entities that they authorize to receive your PII, but the Authorities need not maintain direct control over such entities. In addition, in connection with Statewide Longitudinal Data Systems, State Authorities may collect, compile, permanently retain, and share without your consent PII from your education records, and they may track your participation in education and other programs by linking such PII to other personal information about you that they obtain from other Federal or State data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student records systems.

The Colorado Community College System considers the following to be directory information and **Front Range Community College** staff may disclose this information, without prior consent, to anyone inquiring in person, by phone, or in writing: Student name; Major field of study; Dates of student attendance; Degrees / certificates and awards student has earned; Most recent educational institution attended by the student; enrollment status (full time, part time, etc.), Participation in officially recognized activities and sports; and if participating in an officially recognized activity or sport, height, weight, and high school attended.

Addresses (including mail and e-mail) are considered PII and are not released as Directory Information except for the following:

• Graduation lists released to news media, which may include the student's city of residence.
• Other listings to the news media and college personnel for special awards, honors, and events.
• Notification to Phi Theta Kappa Honor Society and other academic honor societies for students who are eligible to be considered for membership.

Additionally, name, address, College-issued email address, phone number, date and place of birth, level of education, most recently attended college, field of study, and degree(s) received of students may be released to military recruiters upon request in accordance with the Solomon Amendment. All other information contained in student records is considered private and not open to the public without the student's written consent. Students who do not want their directory/public information released to third parties or students who do not want to be listed in the College online e-Directory should complete a form to suppress directory information available online or at the Office of the Registrar 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

Colorado Department of Higher Education Appeal

In addition to hearing appeals regarding the state guaranteed general education program, a student may appeal directly to the Colorado Department of Higher Education (CDHE) https://highered.colorado.gov/Academics/Complaints/FileComplaint.aspx when the issue involves one of the following areas:

- Violation of the Student Bill of Rights (see Student Bill of Rights (p. 149))

- Noncompliance with Colorado Department of Higher Education (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

The Colorado Department of Higher Education (CDHE) appeal process is not designed to resolve disputes between an individual and an institution that involves grades, billing, terms of employment or athletic eligibility. Front Range Community College tuition classification decisions cannot be appealed to the Colorado Department of Higher Education (CDHE).

Procedures:

To initiate an appeal with the Colorado Department of Higher Education (CDHE), submit a written request (letter or email) describing the issue(s) and steps taken to resolve the issue with Front Range Community College. Eligible appeals, as indicated above, will follow the full appeal process. Appeals to FRCC will be referred to the appropriate college authority. For more information regarding Colorado's Student Appeal Process, go to https://highered.colorado.gov/search?search=academics+appeals.

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.

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.

Front Range Community College prohibits all forms of discrimination and harassment including those that violate federal and state law, or the State Board for Community Colleges and Occupational Education Board Policy 3-120 and SP 4-120b. The College does not discriminate on the basis of sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity or sexual orientation in its employment practices or educational programs and activities. Front Range Community College will take appropriate steps to ensure that the lack of English language skills will not be a barrier to admission and participation in vocational education programs.

The College has designated JoAnne Wilkinson, Executive Director, Organizational Development and Human Resources with the responsibility to coordinate the college's civil rights compliance activities and grievance procedures under Titles VI and VII of the Civil Rights Act of 1964. Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and Title II of the Americans with Disabilities Act. If you have any questions, please contact 303-678-3707, or joanne.wilkinson@frontrange.edu or mail to 2190 Miller Drive, Longmont, CO, 80501.

FACTA Notification to Students

In accordance with the Fair and Accurate Credit Transactions Act (FACTA) of 2003, FRCC adheres to the Federal Trade Commission's (FTC) Red Flag Rule (A Red Flag is any pattern, practice, or specific activity that indicates the possible existence of identity theft.), which implements Section 114 of the FACTA and to the Colorado Community College System's Identity Theft Prevention and Detection Program, which is intended to prevent, detect and mitigate identity theft in connection with establishing new covered accounts or an existing covered account held by the Colorado Community College System (System or CCCS) or one of its thirteen (13) community colleges, and to provide for continued administration of the Program. If a transaction is deemed fraudulent, appropriate action will occur. Action may include, but is not limited to, cancelling of the transaction, notifying and cooperating with law enforcement, reporting to the Student Code of Conduct Office, and notifying the affected parties. For more information on FACTA, Red Flag Rules, and Identity Theft Consumer Information, please see the links provided below.

Federal Trade Commission Statute: https://www.ftc.gov/about-ftc

Red Flag Rules: https://www.ftc.gov/tips-advice/business-center/guidance/fighting-identity-theft-red-flags-rule-how-guide-business

Identity Theft Consumer Information: https://www.consumer.ftc.gov/features/feature-0014-identity-theft

Notice of Non-Discrimination

Front Range Community College prohibits all forms of discrimination and harassment including those that violate federal and state law, or the State Board for Community Colleges and Occupational Education Board Policies (BP) 3-120 and (BP) 19-60. The College does not discriminate on the basis of sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity, or sexual orientation in its employment practices or educational programs and activities. Front Range Community College will take appropriate steps to ensure that the lack of English language skills will not be a barrier to admission and participation in vocational education programs.

The College has designated **JoAnne Wilkinson**, Executive Director, Organizational Development and Human Resources as its AFFIRMATIVE ACTION (AA), OFFICER, EQUAL OPPORTUNITY (EO), AND TITLE IX COORDINATOR with the responsibility to coordinate its civil rights compliance activities and grievance procedures.

If you have any questions, please contact **JoAnne Wilkinson**, Executive Director, Organizational Development and Human Resources at 303-678-3707, Joanne.Wilkinson@frontrange.edu or Bob Gregory, Employee Relations Direct, at 303-404-5473, Robert.Gregory@frontrange.edu. To access the Civil Rights and Sexual Misconduct Resolution Process click here SP 19-60a.

File a Complaint

You may also contact the Office for Civil Rights, U.S. Department of Education, Region VIII, Federal Office Building, 1244 North

Speer Boulevard, Suite 310, Denver, CO 80204, phone (303) 844-5695.

FRCC Civil Rights Grievance & Investigation Process

Basis

Board Policy BP 19-60 and SP 19-60 provides that employees and students shall not be subjected to unlawful discrimination and/or harassment on the basis of sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity or sexual orientation in its employment practices or educational programs and activities.

Procedure

This FRCC procedure, adapted from the National Center for Higher Education Risk Management (NCHERM) and the Association of Title IX Administrators (ATIXA), should be applied to all civil rights grievances.

Definitions

Complainant(s) is a person who is subject to alleged protected class discrimination, harassment or related retaliation. For purposes of this procedure, a complainant can be an FRCC Employee(s), student(s), authorized volunteer(s), guest(s), or visitor(s).

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

Title IX Coordinator(s) and ADA, Title VI and VII Coordinator(s) (EO Coordinator) and Deputy Coordinator(s) are the employee(s) designated by the college president to oversee all civil rights complaints for both employees and students.

Appointing Authority/Disciplinary Authority is the individual with the authority or delegated authority to make ultimate decisions concerning a particular student. A Disciplinary authority is the individual who or office that has the authority or delegated authority to impose discipline upon a particular employee or student. The Chief Student Services Officer (CSSO) is the individual designated by the College President to administer student affairs and be responsible for administering the college's Student discipline, including student discipline.

Investigator(s) is the person(s) charged to investigate the civil rights grievance by the Title IX and/or the EO Coordinator. This person can be referred to as the "Deputy Title IX and/or EO Coordinator(s)".

Discrimination is:

- Any distinction, preference, advantage for or detriment to an individual compared to others that is:

- Based upon an individual's actual or perceived sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity, or sexual orientation, that is so severe, persistent or pervasive, and

- That unreasonably interferes with or limits:

  - Employee's employment conditions or deprives the individual of employment access or benefits.

  - Student's ability to participate in, access, or benefit from the college's educational program or activities.

  - Authorized volunteers' ability to participate in the volunteer activity.

  - Guests and visitors' ability to participate in, access, or benefit from the college's programs.

Discriminatory Harassment is:

- Detrimental action based on an individual's actual or perceived sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion, genetic information, gender identity or sexual orientation, which is

- Severe, persistent or pervasive that it unreasonably interferes with or limits:

- Employee's employment conditions or deprives the individual of employment access or benefits.

- Student's ability to participate in, access, or benefit from the college's educational program or activities.

- Authorized volunteers' ability to participate in the volunteer activity.

- Guests and visitors' ability to participate in, access, or benefit from the college's programs.

Retaliatory Harassment is:

- Any adverse employment or educational action taken against a person because of the person's perceived participation in a complaint or investigation of discrimination and/or harassment based on federal or state civil rights laws.

- It is a violation of this procedure to engage in retaliatory acts against any person who reports an incident of discrimination and/or harassment, or any person who testifies, assists or participates in a proceeding, investigation or hearing relating to such allegation of discrimination and/or harassment. Such act will be subject to discipline, up to and including expulsion for students, termination for FRCC employees, and dismissal for authorized volunteers, guests or visitors.

Sexual Misconduct offenses include, but are not limited to:

- Sexual Harassment

- Non-Consensual Sexual Contact (or attempts to commit same)

- Non-Consensual Sexual Intercourse (or attempts to commit same)

- Sexual Exploitation

- For more information on sexual misconduct please refer to the System President's Policy BP 19-60 and SP 19-60.

Complaint Procedures Concerning Discrimination and/or Harassment

FRCC does not permit discrimination or harassment in our work environment, educational programs and activities. FRCC can respond to discrimination and/or harassment only if it is aware of the allegations made. Further, FRCC can more effectively investigate the sooner the allegation is brought to its attention. Any employee or student who believes they have been subjected to discrimination and/or harassment based on federal

or state civil rights laws should follow this procedure to report these concerns.

Reporting an Incident of Discrimination and/or Harassment

Employee's Obligation to Report

FRCC employees have an ethical obligation to report any incidences they are aware of concerning discrimination and/or harassment. If the employee is unsure, they may direct their questions to Human Resources at the college. Failure to report will be considered a violation of BP 3-70, Colorado Community College System Code of Ethics, and may result in discipline, up to and including termination.

To Report a Complaint Confidentially

If one desires that details of the incident be kept confidential, they should speak with on-campus mental health counselors or off-campus rape crisis resources who can maintain confidentiality. On-campus mental health counselors are available to help you free of charge, and can be seen on emergency basis. In addition, you may speak off-campus with members of the clergy and chaplains, who will also keep reports made to them confidential. There are additional resources available here. If you want to file a confidential complaint to be investigated, please click here. No names are required to complete this form.

Reporting a Complaint

In order to take appropriate corrective action, FRCC must be aware of discrimination, harassment and related retaliation that occurs in FRCC employment and educational programs or activities. Therefore, anyone who believes s/he has experienced or witnessed discrimination, harassment or related retaliation should promptly report such behavior to the Title IX/EO Coordinator by clicking here or call 303-678-3707.

Clery Act-Federal Statistical Reporting Obligations

Certain campus officials have a duty to report criminal misconduct for federal statistical reporting purposes (Clery Act). All personally identifiable information is kept confidential, but statistical information must be passed along to campus law enforcement regarding the type of incident and its general location (on or off-campus, in the surrounding area, but no addresses are given) for publication in the annual Campus Security Report. This report helps to provide the community with a clear picture of the extent and nature of campus crime, to ensure greater community safety. Mandated federal reporters include: student affairs/student conduct officers, campus law enforcement, local police, student activities staff, human resources staff, advisors to student organizations and any other official with significant responsibility for student and campus activities. The information to be shared includes the date, the location of the incident (using Clery location categories) and the Clery crime category. This reporting protects the identity of the victim and may be done anonymously.

Clery Act-Federal Timely Warning Reporting Obligations

Victims of criminal misconduct should also be aware that college administrators must issue immediate warnings for incidents reported to them that are confirmed to pose a serious or continuing threat to students and employees. The college will make every effort to ensure that a victim's name and other identifying information is not disclosed, while still providing enough information for community members to make safety decisions in light of the danger. The reporters for timely warning purposes are the same as detailed at the end of the above section.

For more information on Clery Act reporting requirements please contact Gordon Goldsmith, Director of Campus Security and Preparedness, 303-404-5799.

Who to Report to

Report all concerns or complaints relating to discrimination, harassment, or sexual misconduct to: JoAnne Wilkinson, Executive Director, Organizational Development & Human Resources, Title IX/EO Coordinator, 2190 Miller Drive, Longmont, CO 80501, 303-678-3707. To report anonymously please go to: https://cm.maxient.com/reportingform.php?FrontRangeCC&layout_id=40

Employees who wish to report a concern or complaint relating to discrimination or harassment by/towards a student may do so by reporting the concern to the Title IX Coordinator(s).

Students with complaints of this nature also have the right to file a formal complaint with the United States Department Education:

Office for Civil Rights (OCR)

U.S. Department of Education, Region VIII

Federal Office Building

1244 North Speer Boulevard, Suite 310

Denver, CO 80204-3582

Telephone: (303) 844-3417

Facsimile: (303) 844-4303

Email: OCR.Denver@ed.gov

Web: https://www2.ed.gov/about/offices/list/ocr/index.html

For employees with complaints of this nature also have the right to file a formal complaint with the Colorado Department of Regulatory Agencies

Colorado Civil Rights Division

1560 Broadway #1050

Denver, CO 80202

Telephone: (303) 894-2997

Facsimile: (303) 894-7830

Web: https://www.colorado.gov/pacific/dora/civil-rights

Or

United States Equal Employment Opportunity Commission

303 E. 17th Avenue

Suite 410

Denver, CO 80203

Telephone: (800) 669-4000

Facsimile: (303) 866-1085

Web: http://www.eeoc.gov/field/denver/index.cfm

All other grievances where the complainant is a student(s) and the basis of the complaint is not discrimination and/or harassment based on federal or state civil rights laws will be addressed pursuant to SP 4-31a: https://cccs.edu/policies-and-procedures/system-presidents-procedures/sp-4-31a-student-complaint-procedure/

All other grievances by an employee(s) and the basis of the complaint is not discrimination and/or harassment based on federal or state civil rights laws will be addressed pursuant to SP 3-50a. https://cccs.edu/policies-and-procedures/system-presidents-procedures/sp-3-50a-employee-grievances/

Preliminary Steps

This complaint process involves an immediate initial inquiry to determine if there is sufficient evidence to believe a violation has occurred. If the inquiry warrants, the college will initiate a prompt, thorough and impartial investigation. This investigation is designed to provide a fair and reliable determination about whether policies or procedures have been violated. If so, FRCC will implement a prompt and effective remedy designed to end the discrimination, prevent its recurrence and address its effects.

Timeline of Process (Informal and Formal)

FRCC shall make every effort to complete the informal process no later than 60 days from the date of notice of complaint.

If the complainant chooses to file a formal complaint, or the informal process was unsuccessful, FRCC shall make every effort to complete the investigation and implement remedies, if any, no later than 60 days from the date the complaint is filed or informal resolution is concluded.

If the college cannot resolve the formal complaint within these timeframes, the college may extend the deadline when necessary to properly investigate the complaint.

Formal and Informal Grievance Procedure for Student and Employee Complaints

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

In all cases, the Title IX/EO Coordinator will give consideration to the victim in how the grievance is pursued, but reserves the right when necessary to protect the community, to investigate and pursue a resolution when an alleged victim chooses not to participate in the grievance process.

Informal Grievance Process

Before pursuing the formal complaint process, every reasonable effort should be made to constructively resolve issues with FRCC employees and students at the informal level. Whenever possible and safe, the problem or complaint should first be discussed with the individual involved in the complaint. If satisfactory resolution is not reached after discussion with the individual, the employee or student should contact the individual's direct supervisor to attempt to resolve the complaint. If these efforts are unsuccessful, the formal complaint process may be initiated. The college does not require an employee or student to contact the person involved or that person's supervisor if doing so is impracticable, or if the employee or student believes that the conduct cannot be effectively addressed through informal means.

If the incident involves an alleged sexual assault, the college will not enter into the informal process.

Formal Grievance Process

If the informal grievance process is unsuccessful, or if FRCC or the complainant chooses not to pursue the informal process, upon receipt of the grievance the Title IX/EO Coordinator(s) will open a formal case, file and assign an investigator(s) who will direct the investigation, confer with the Title IX Coordinator/EO Coordinator(s) on interim action, accommodations for the alleged victim, and take any other necessary remedial short-term actions.

The college has the right to assign more than one investigator per incident.

The investigator(s) will then take the following steps:

- In coordination with the Title IX/EO Coordinator(s), initiate any necessary remedial actions;
- Determine the identity and contact information of the complainant(s) (whether that be the initiator, the alleged victim, or a college proxy or representative);
- Identify the policies and procedures allegedly violated;
- Conduct an immediate initial investigation to determine if there is sufficient evidence to charge the respondent(s), and what policy and procedure violations should be alleged as part of the complaint;
    - If there is insufficient evidence to support the complaint, the grievance should be closed with no further action;
- Meet with the complainant to finalize the complaint and
- Prepare the notice of charges on the basis of the initial investigation;
- Commence a thorough, reliable and impartial investigation by developing a strategic investigation plan, including a witness list, evidence list, intended timeframe, and order of interviews for all witnesses and the accused individual, who may be given notice prior to or at the time of the interview;
- Complete the investigation promptly, and without unreasonable deviation from the intended timeline;
- Make a finding, based on a preponderance of the evidence (whether a policy violation is more likely than not);
- Present the findings to the respondent, who may accept the findings, accept the findings in part and reject them in part, or may reject all findings;
- Share the findings and update the complainant on the status of the investigation and the outcome.

Elaboration on Employee and Student Participation in the Grievance Process

The investigator(s) will contact or request a meeting with the complainant(s), the alleged victim (if different people), and the respondent(s). The investigator(s) may also contact or request a meeting with relevant college staff, students, or others as part of the investigation. The complainant(s) and respondent(s) may offer any documentation, witnesses, or other materials in support of the complaint.

The complainant(s) and the respondent(s) have the option to have an advocate during a meeting with the investigator(s) to discuss the documentation submitted in support of the

grievance; however, the complainant(s) or respondent(s) cannot be represented by an attorney or law student (legal counsel) unless civil or criminal actions concerning the particular incident in question are pending. Under those limited exceptions, an attorney or law student may be present but his or her role shall be advisory only. The party represented by legal counsel must notify the investigator(s) forty-eight (48) hours in advance of any scheduled meeting so that the investigator(s) can notify the other party. These procedures are entirely administrative in nature and are not considered legal proceedings.

The complainant(s) and respondent(s) must advise the investigator(s) of the identity of an advocate or witness at least two (2) business days before the date of the meeting with the investigator(s).

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

At the investigator's discretion, the investigator(s) may remove anyone who is causing a disruption to the meeting or is being uncooperative.

All these same opportunities and privileges extend to all parties to the complaint.

Findings

Investigator(s) shall issue the findings in the form of an investigation report. Both parties shall be informed of the findings.

Where the respondent accepts the finding that they violated the non-discrimination, anti-harassment, or retaliation policy, the CSSO will then proceed with disciplinary action, after consultation with the Title IX/EO Coordinator(s), in accordance with the applicable policies and procedures that govern.

Filing an Appeal Request

In the event that a respondent accepts the findings of the investigation, those findings cannot be appealed during the student discipline process.

All sanctions imposed by the original decision maker will be in effect during the appeal. A request may be made to the CSSO for special consideration in exigent circumstances, but the presumptive stance of the institution is that the sanctions will stand. Graduation, study abroad, internships/externships, etc. do not in and of themselves constitute exigent circumstances, and students may not be able to participate in those activities during their appeal. In cases where the appeal results in reinstatement to the institution or of privileges, all reasonable attempts will be made to restore the employee, student, authorized volunteer, guest or visitor to their prior status, recognizing that some opportunities lost may be irretrievable in the short term.

Special Grievance Process Provisions

Attempted violations. In most circumstances, college will treat attempts to commit discrimination, harassment, or retaliation as if those attempts had been completed.

College as Complainant. As necessary, college reserves the right to initiate a complaint, to serve as complainant, and to initiate conduct proceedings without a formal complaint by the victim of misconduct.

Standard of proof -the college will use the preponderance of evidence standard in the civil rights investigation proceedings, meaning, the college will determine whether it is more likely than not a violation occurred.

Jurisdiction -College grievance proceedings may be instituted over incidences that occur or are related to College or college-sanctioned activities or was of such a nature to impact upon the college.

False Reports. College will not tolerate intentional false reporting of incidents. False reporting could lead to disciplinary action, up to and including termination for employees, and expulsion for students.

For FRCC employees, false reports will be considered a violation of BP 3-70, Code of Ethics.
For students, false reports will be considered a violation of the college student code of conduct.
False reporting may also be a violation of state criminal statutes and civil defamation laws.

The Parties do not have the right to be represented by legal counsel during these proceedings except in the case where civil or criminal actions concerning the grievance are pending and in that case the legal counsel's role shall be advisory only. The party represented by legal counsel must notify the investigator(s) forty-eight (48) hours in advance of any scheduled meeting so that the investigator(s) can notify the other party.

Immunity for Victims and Witnesses that are Students. FRCC encourages the reporting of violations and crimes by victims and witnesses. Sometimes, victims or witnesses are hesitant to report to FRCC officials or participate in grievance processes because they fear that they themselves may be accused of policy and procedure violations, such as underage drinking at the time of the incident. It is in the best interests of this community that as many victims as possible choose to report to college officials, and that witnesses come forward to share what they know. To encourage reporting, FRCC pursues a policy of offering victims of crimes and witnesses limited immunity from policy violations related to the incident. This is not immunity from criminal prosecution.

Bystander Engagement for Students. The welfare of students in our community is of paramount importance. At times, students on and off-campus may need assistance. FRCC encourages students to offer help and assistance to others in need. Sometimes, students are hesitant to offer assistance to others, for fear that they may get themselves in trouble (for example, as student who has been drinking underage might hesitate to help take a sexual misconduct victim to the Campus Police or Security). The college pursues a policy of limited immunity for students who offer help to others in need. This is not immunity from criminal prosecution. While policy and procedure violations cannot be overlooked, the college will provide educational options, rather than punishment, to those who offer their assistance to others in need.

Parental Notification when Students are involved in an incident. The college reserves the right to notify parents/guardians of dependent students regarding any health or safety risk, change in student status or conduct situation, particularly alcohol and other drug violations. The college may also notify parents/guardians of non-dependent students who are under age 21 of alcohol and/or drug policy violations. Where a student

is not-dependent, college will contact parents/guardians to inform them of situations in which there is a significant and articulable health and/or safety risk. The college also reserves the right to designate which college officials have a need to know about individual conduct complaints pursuant to the Family Educational Rights and Privacy Act.

Notification of Outcomes. Complainant(s) and Respondent(s) have an absolute right to be informed of the outcome, essential findings, the sanctions imposed if any, unless the college has a legitimate concern for the health, safety, or welfare of the college.

The outcome of a campus investigation is part of the educational record of the accused student, and is protected from release under a federal law, FERPA. However, FRCC observes the legal exceptions as follows:
- Specifically, Complainant(s) in non-consensual sexual contact/intercourse, sexual exploitation, sexual harassment, stalking, and relationship violence incidents have an absolute right to be informed of the outcome, essential findings, and sanctions of the hearing, in writing, without condition or limitation.
- The college may release publicly the name, nature of the violation and the sanction for any student who is found in violation of a college policy that is a "crime of violence," including: arson, burglary, robbery, criminal homicide, sex offenses, assault, destruction/damage/vandalism of property and kidnapping/abduction. The college will release this information to the complainant in any of these offenses regardless of the outcome.

Alternative Testimony Options for Employees and Students. For sexual misconduct complaints, and other complaints of a sensitive nature, whether the alleged victim is serving as the complainant or as a witness, alternative testimony options will be given, such a placing a privacy screen in the hearing room, or allowing the alleged victim to testify outside the physical presence of the accused individual, such as by Skype. While these options are intended to help make the alleged victim more comfortable, they are not intended to work to the disadvantage of the accused student.

Past Sexual History/Character of Employees and Students. The past sexual history or sexual character of a party will not be admissible by the other party in the investigation or hearing unless such information is determined to be highly relevant by the investigator. All such information sought to be admitted will be presumed irrelevant, and any request to overcome this presumption by the parties must be included in the complaint/response or a subsequent written request, and must be reviewed in advance of the hearing by the CSSO. While previous conduct violations by the accused student are not generally admissible as information about the present alleged violation, the CSSO may supply previous complaint information to the investigators, the conduct board, or may consider it him/herself if s/he is hearing the complaint, only if:

- The accused was previously found to be responsible
- The previous incident was substantially similar to the present allegation
- Information indicates pattern of behavior & substantial conformity with that pattern by the accused student

Retaliatory Acts

If any person who reports an incident of discrimination and/or harassment, or any person who testifies, assists or participates in a proceeding, investigation or hearing relating to such allegation of discrimination and/or harassment, feels they are being subjected to retaliatory acts may report such incidences to the Title IX/EO Coordinator.

It is a violation of this procedure to engage in retaliatory acts against any person who reports an incident of discrimination and/or harassment, or any person who testifies, assists or participates in a proceeding, investigation or hearing relating to such allegation of discrimination and/or harassment. Such act will be subject to discipline, up to and including expulsion for students, termination for FRCC employees, and dismissal for authorized volunteers, guests or visitors.

Revising this Procedure

This procedure defines and prohibits harassment on the basis of federal and state law as interpreted by the courts. If statutory provisions, regulatory guidance, or court interpretations change or conflict with this policy, the college's procedure can be deemed amended as of the time of the decision, ruling or legislative enactment to assure continued compliance.

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

Sexual Harassment Misconduct Title IX

Students, Employees, and Visitors at FRCC have the right to be free from sexual harassment and misconduct. Title IX of the Education Amendments of 1972 (known simply as Title IX) is the federal law that protects you from discrimination on the basis of sex in education programs and activities. Furthermore, State Board Policy (BP) 3-120 and (BP) 19-60 provide that employees and students shall not be subjected to unlawful discrimination and/or harassment on the basis of sex/gender, race, color, age, creed, national or ethnic origin, physical or mental disability, veteran status, pregnancy status, religion or sexual orientation in employment conditions or educational programs or activities.

If you have any questions, please contact **JoAnne Wilkinson**, Executive Director, Organizational Development and Human Resources at 303-678-3707, JoAnne.Wilkinson@frontrange.edu, or Bob Gregory, Employee Relations Director, at 303-404-5473, Robert.Gregory@frontrange.edu. To access the Civil Rights and Sexual Misconduct Resolution Process click here SP 19-60a.

- File a Complaint
- See FRCC's sexual harassment policy and complaint procedures
- See resources available in the community

Policy on Exclusionary Orders

FRCC, acting through its President, any Vice President, or Director of Campus Security and Preparedness ("College Representatives") hereby reserves the right to exclude any person not authorized to engage in work, study, or other activities ("Unauthorized Persons") from all or any part of its campuses or facilities to the extent that such person's conduct: (i) materially disrupts, or presents a significant threat of material disruption to FRCC's academic mission; or (ii) constitutes a substantial threat to the safety and well-being of persons

lawfully present on any such campuses or in any such facilities. Such reserved right shall be in addition to all rights of FRCC's to exclude persons in connection with the imposition of internal discipline. Additional information can be obtained from the Department of Campus Security and Preparedness.

Persons Convicted of Rioting Offenses

Under Colorado law, no person shall be enrolled in a state supported institution of higher education for a period of twelve months following the date of a guilty verdict, guilty plea, no contest plea, or a deferred judgment and sentence for inciting riot, arming rioters, or engaging in a riot.

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.

COURSES

This section describes credit courses offered by FRCC. Courses are grouped by subject area and are listed in alphabetical order.

- Each course title begins with a three-letter subject area and the course number (e.g., ENG 1021).

- Each course includes a brief course description, credits, contact hours, and prerequisite(s) and/or corequisite(s) if required for the course.

- A prerequisite must be taken before entering a course.

- A corequisite must be taken prior to, or concurrently with, a course.

- Contact hours indicate the total number of class hours during the term.

- Some courses require a course fee.

- A grade of "C" or better is considered passing.

- All courses included in this catalog may apply to program requirements of specified certificates and/or degrees (e.g. AAS, AGS, AA, or AS) with the exception of courses listed on the courses not applicable to any degree or certificate (p. 129) section of this catalog.

- Specialized courses must be specified as allowable to apply toward degree/certificate requirements. You can learn more about specialized courses such as internship, capstone, clinical, etc. by viewing the Specialized Courses (p. 129) section of this catalog.

- Courses with an * have been identified by the Colorado Department of Higher Education as being the State Guaranteed General Education courses. You can learn more about each designation by viewing the GT Pathways General Education Curriculum (p. 128) & GT List sections of this catalog.

To view Programs offered at FRCC by requirements or by MAPs (p. 24), view our Programs (p. 12) section of this catalog.

AAA - Advancement of Academic Achievement

AAA 0050 - Semester Survival (2)
Emphasizes basic study skills in order to bolster their chances of completing the current semester successfully.

AAA 0091 - Online Learning Strategies (1)
Introduces specific skills and strategies to successfully use online instruction and college e-services. Through videos and practice assignments, students will learn how to use the Learning Management System (LMS) and become familiar with college support services and other online resources.

AAA 1001 - College 101: Student Experience (1)
Introduces students to college culture and prepares them for the challenges they will face in higher education. Through a series of interactive seminars, students discover learning in a multicultural environment and use college and community resources to attain education and career goals.

AAA 1009 - Advanced Academic Achievement (3)
Examines theories and practices associated with successful learning to enhance college success. Techniques covered include academic proficiency, personal management, effective collegiate communication, critical and creative thinking, development of community, awareness of diverse identities, and educational and career planning.

ACC - Accounting

ACC 1001 - Fundamentals of Accounting (3)
Introduces accounting fundamentals with emphasis on the procedures and practices used in business organizations. Major topics include the accounting cycle for service and merchandising companies, including end-of-period reporting.

ACC 1011 - Intro to Financial Accounting (3)
Focuses on financial accounting concepts prescribed by Generally Accepted Accounting Principles (GAAP), including financial information for external partners, the accounting cycle process, basic terminology, transaction analysis, internal control systems, and financial statement preparation and analysis.

ACC 1012 - Intro to Managerial Accounting (3)
Focuses on the fundamentals of managerial accounting and cost management as tools to aid internal users' decision-making processes. This course covers basic managerial accounting concepts, such as product costing and cost behavior and control. It also covers internal management decision making tools, including cost-volume-profit analysis, budgeting, cost analysis, and planning and control systems.

Prerequisite: ACC 1001 or ACC 1011 or ACC 1021.

ACC 1021 - Accounting Principles I (4)
This course introduces accounting principles for understanding the theory and logic that underlie procedures and practices for business organizations. Major topics include the accounting cycle for service and merchandising companies, internal control principles and practices, notes and interest, inventory systems and costing, and plant and intangible asset accounting.

ACC 1022 - Accounting Principles II (4)
This course continues the application of accounting principles to business organizations. Major topics include corporate equity and debt financing, investments, cash flow statements, financial analysis, budgeting, cost and managerial accounting.

Prerequisite: ACC 1021.

ACC 1025 - Computerized Accounting (3)
Introduces the capabilities of computer applications in accounting. Includes solving accounting problems of a financial nature and hardware and software controls.

Prerequisite: ACC 1001 or ACC 1011 or ACC 1021.

ACC 1031 - Income Tax (3)
Introduces basic concepts of federal income taxation and tax administration with emphasis on taxation of individuals and sole proprietorships.

ACC 1032 - Tax Help Colorado (2)
Examines the preparation of individual, federal, and state income tax returns within the guidelines and limitations set forth by the Tax Help Colorado program and IRS guidelines. Emphasis is placed on form preparation with the use of tax software.

ACC 1033 - Tax Help Colorado Practicum (1)
Utilizes income tax knowledge and training in the context of a community service setting. Volunteers prepare individual federal and state income tax within the parameters of the Tax Help Colorado program and Internal Revenue Service (IRS) guidelines.

Prerequisite: ACC 1032.

ACC 1035 - Spreadsheet Applications for Accounting (3)
Introduces spreadsheets as an accounting tool in the application of fundamental accounting concepts, problem-solving, and decision-making skills.

Corequisite: ACC 1001 or ACC 1011 or ACC 1021 and [CIS 1018 or CIS 1055].

ACC 1038 - Payroll and Sales Tax (3)
Introduces laws pertaining to payroll and sales taxes including record keeping rules; preparation of various federal, state and local forms for reporting payroll and sales taxes; and computerized payroll procedures.

Corequisite: ACC 1001 or ACC 1011 or ACC 1021.

ACC 2011 - Intermediate Accounting I (4)
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. Focuses on the preparation and analysis of business information relevant and useful to external users of financial reports. Explores the theories, principles and practices surveyed in Accounting Principles and critically examines `real-world` financial analysis and reporting issues.

Prerequisite: ACC 1012 or ACC 1022.

ACC 2016 - Govt & Not-for-profit Accounting (3)
Addresses concepts of budgetary control as a matter of law and public administration theory. Accounting principles and procedures necessary to implement budgetary controls for governmental units and other not-for-profit institutions and organizations are presented.

Prerequisite: ACC 1012 or ACC 1022.

ACC 2031 - Business Taxation (3)
Introduces student to taxation of business entities and transactions. Topics include taxation of property transactions, various tax issues that apply to different tax entities, tax administration and practice, and the taxation effects of formation, operation, and dissolution of corporations, partnerships, S corporations, trusts and estates.

Prerequisite: ACC 1031 or ACC 1032.

ACC 2065 - Review Course Enrolled Agent (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 (EA) Exam.

Prerequisite: ACC 1031 or ACC 1032.

ACC 2068 - Certified Bookkeeper Review (3)
Reviews accounting topics to prepare students to sit for a national bookkeeping certification exam. Topics include adjusting entries, error correction, payroll, depreciation, inventory, internal controls, and fraud prevention.

Prerequisite: ACC 1001 or ACC 1011 or ACC 1021.

ACC 2080 - Internship (1)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business locations and with the direct guidance of the instructor.

ACC 2088 - Practicum (1)
Provides students an opportunity to gain practical experience in applying their skills and/or to develop specific skills in a practical work setting. This instructor will work with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the practicum supervisor.

Prerequisite: Faculty permission is required.

ACC 2089 - Capstone (1)
Provides pending accounting graduates with the opportunity to evaluate analysis skills. Using the knowledge acquired from their academic studies, the student evaluates the financial standing of three different companies. Financial analysis using spreadsheet capabilities and written report skills are included. The student works independent of a traditional classroom setting.

Corequisite: ACC 1012 or ACC 1022.

AEC - Architectural Engineering and Construction Technology

AEC 1200 - Print Reading Residential/Commercial (3)
Interpret construction prints and the related documents produced by the residential or commercial architect and used in the construction industry.

Prerequisite: None.

AEC 1210 - 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, multi-view, oblique and isometric projections, and basic construction drawings.

AEC 1231 - Residential Construction Drawing (4)
Covers an investigation of light frame construction techniques and the production of residential construction drawings. The course covers residential construction materials, components and systems related to wood frame structures. Students produce a professional set of construction drawings of a residential structure.

Prerequisite: Prerequisite/Corequisite: AEC 1210 and AEC 1520 and CAD 2220.

AEC 1232 - Commercial Construction Drawing (4)
Examines the drawing of architectural plans, elevations, sections, details, and schedules. Students produce a portfolio of construction drawings of a multi-story skeleton structure.

Prerequisite: CAD 2220. Corequisite: AEC 1231.

AEC 1520 - 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.

AEC 1600 - Construction Practices and Documents (2)
Investigates construction practices, specifications, contracts and other legal documents used in the building construction industry. The roles and responsibilities of design and construction team participants are also explored.

Prerequisite: Prerequisite or Corequisite: AEC 1520.

AEC 2080 - Internship (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/ coordinator.

AEC 2089 - Capstone (3)
Applies knowledge of building construction techniques and architectural drawing conventions in developing plans, elevations, sections and details of a building structure by developing a set of construction drawings from design development drawings and specifications.

Prerequisite: AEC 1231.

AEC 2200 - Building Design Development (3)
Acquaints the student with the process of building design development. Factors, which influence and dictate building design, are explored in lecture. Emphasis is placed upon interpretation and application of the building code. Students apply code and program requirements in generating and revising design development drawings of single and mixed occupancy buildings.

Prerequisite: AEC 1231.

AEC 2300 - Sustainable Building Systems (3)
Investigates the technologies and strategies related to sustainable (green) materials and systems for buildings. Topics include: energy and environmental consciousness/regulations; the high-performance building envelope; alternative construction techniques (adobe, cob, rammed earth, straw bale); microclimate/site factors; sustainable green materials; and passive solar, active thermal solar, photovoltaic energy, wind energy conversion, on site water use/reuse and waste disposal systems.

Prerequisite: AEC 1520.

AEC 2410 - Applied Statics and Strengths of Materials (3)
Provides an algebra-based investigation of concepts in statics and strengths of materials. Topics include a study of fundamental mechanical properties of materials, single planar forces, properties of sections, and two-dimensional free body, shear and bending moment diagrams.

Prerequisite: MAT 1340 and AEC 1520.

AEC 2520 - Building Environmental Systems I (3)
Introduces concepts in operation and design of mechanical and sustainable (green) building systems that provide a healthy, comfortable and productive indoor air environment. Major topics covered include thermal comfort, heat and moisture flow in buildings, indoor air quality, and mechanical (HVAC and solar thermal) systems for climate in buildings.

Prerequisite: AEC 1520.

AEC 2540 - Elementary Site Planning (3)
Acquaints the student with basic surveying principles, building site analysis and associated drawings. Emphasizes systems of land survey, topographical analysis, zoning and site requirements, and other factors that influence building site development. Students complete problems in building construction surveying.

Prerequisite: AEC 1520. Corequisite: MAT 1420.

AEC 2610 - Construction Estimating (3)
Studies fundamental structural elements and building structures. Building forces, transfer of forces, and structural members and systems are investigated through computation and project work. Fundamental engineering theory related to steel, wood, reinforced concrete and masonry are introduced.

Prerequisite: AEC 1210, AEC 1520 and CIS 1018.

AIR - Air Force ROTC

AIR 1001 - Heritage & Values I (1)
This course provides an introduction to the Air Force, encourages students to pursue an AF career or seek additional information to be better informed about the role of the USAF. The course allows students to examine general aspects of the Department of the Air Force, AF Leadership, Air Force benefits, and opportunities for AF officers. The course also lays the foundation for becoming an Airman by outlining our heritage and values.

AIR 1002 - Heritage and Values II (1)
This is a continuation of AIR 1001. This course provides a historical perspective including lessons on war and the US military, AF operations, principles of war, and airpower. This course also provides students with an understanding for the employment of air and space power, from an institutional, doctrinal, and historical perspective. The students are introduced to the Air Force way of life and gain knowledge on what it means to be an Airman.

AIR 1003 - Military Leadership Lab I (1)
Complements AIR 1001 by providing cadets with leadership, management and followership experiences. Leadership Laboratory is for students who are members of AFROTC or are eligible to pursue a commission as determined by the Professor of Aerospace Studies. This course consists of physical fitness training and a hands-on practical leadership lab.

AIR 1004 - Military Leadership Lab II (1)
Complements AIR 1002 by providing cadets with continuing leadership, management and followership experiences. Leadership Laboratory is for students who are members of AFROTC or are eligible to pursue a commission as determined by the Professor of Aerospace Studies. This course consists of physical fitness training and a hands-on practical leadership lab and builds upon the outcomes in AIR 1003.

AIR 2001 - Teams & Leadership Fund I (1)
This is designed to provide a fundamental understanding of both leadership and team building. This course teaches students that there are many layers to leadership, including aspects that are not always obvious. Such things include listening, understanding

themselves, being a good follower, and problem solving efficiently.

AIR 2002 - Teams & Leadership Fund II (1)
This is a continuation of AIR 2001. This course is designed to discuss different leadership perspectives when completing team building activities and discussing things like conflict management. This course also provides students with the ability of demonstrating their basic verbal and written communication skills. Active cadets will apply these lessons at Field Training, which follows the AS200 level.

AIR 2003 - Military Leadership Lab III (1)
Complements AIR 2001 by providing cadets with opportunities for higher level leadership, management and followership experiences. This course builds upon the competencies from AIR 1003 and AIR 1004. Leadership Laboratory is for students who are members of AFROTC or are eligible to pursue a commission as determined by the Professor of Aerospace Studies. This course consists of physical fitness training and a hands-on practical leadership lab.

AIR 2004 - Military Leadership Lab IV (1)
Complements AIR 2002 by providing cadets with opportunities for increasingly higher levels of leadership, management and followership experiences. Leadership Laboratory is for students who are members of AFROTC or are eligible to pursue a commission as determined by the Professor of Aerospace Studies. This course consists of physical fitness training and a hands-on practical leadership lab and continues to build upon the learning outcomes from AIR 2003.

ANT - Anthropology

ANT 1001 - Cultural Anthropology: GT-SS3 (3)
Examines the study of human cultural patterns, including communication, economic systems, social and political organizations, religion, healing systems, and cultural change. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

ANT 1003 - Introduction to Archaeology: GT-SS3 (3)
Introduces the science of recovering the human prehistoric and historic past through excavation, analysis, and interpretation of material remains. The course provides a survey of the archaeology of different areas of the Old and New Worlds, the works of selected archaeologists, and major archaeological theories.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

ANT 1004 - Archaeology Laboratory: GT-SS3 (1)
Studies analytical methods in archaeological research including those employed in the field and in the laboratory. This course utilizes practical exercises to illustrate theoretical principles of archaeology, including methods of archaeological survey, excavation, artifact analysis, collection strategies, mapping strategies, and field interpretation.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

ANT 1005 - Biological Anthropology with Laboratory: GT-SC1 (4)
Focuses on the study of the human species and related organisms, and examines principles of genetics, evolution, anatomy, classification, and ecology, including a survey of human variation and adaptation, living primate biology and behavior, and primate and human fossil evolutionary history. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Offered: *(GT:SC1).

ANT 1006 - Physical Anthropology Laboratory: GT-SS3 (1)
Investigates the principles of physical/biological anthropology. This course addresses genetic and evolutionary processes, comparative skeletal anatomy, primate morphology and behavior, human evolution, modern human variation, and forensics through laboratory and/or online practicum exercises and analytical discussions.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

ANT 1101 - Exploring Other Cultures I (3)
Provides an anthropological understanding of a selected culture including language, processes of enculturation, subsistence patterns and economics, kinship and descent, political organization, religion, art, history, and its reactions to the forces of globalization.

ANT 1208 - Archaeology of World Rock Art: GT-SS3 (3)
Introduces the archaeology of new and old-world rock art dating from the historic past to over 30,000 years ago using a scientific perspective. Presents classification, recordation, dating, analysis, management and conservation, research ethics and protocols, and symbolic and ethnographic interpretation and addresses other formal approaches and established as well as emerging theory.

Offered: *(GT-SS3).

ANT 1226 - 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.

ANT 2115 - Native Peoples of North America: GT-SS3 (3)
Studies 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. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Offered: *(GT-SS3).

ANT 2125 - Anthropology of Religion: GT-SS3 (3)
Explores the culturally universal phenomenon of religion including cross-cultural varieties of beliefs in the supernatural and the religious rituals people employ to interpret and control their worlds. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Offered: *(GT-SS3).

ANT 2231 - 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.

ANT 2315 - Intro Forensic Anthropology w/Lab: GT-SC1 (4)
Covers the basic principles of forensic anthropology, an applied field within the discipline of biological anthropology. The course includes the study of the human skeleton, practical application of biological anthropology and archaeology, and judicial procedure, as they relate to the identification of human remains within a medico-legal context. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Offered: *(GT-SC1).

ANT 2550 - Medical Anthropology: GT-SS3 (3)
Studies the basic principles of medical anthropology, an applied field within the discipline of cultural anthropology including 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.

Offered: *(GT-SS3).

AQT - Aquaculture

AQT 2008 - Fish Biology and Ichthyology (5)
Introduces the study of fish. Focuses on fish anatomy and physiology, reproduction and development, behavior and activities, nomenclature and taxonomy, and evolution and adaptations. Covers the basic anatomy of fish and their organ systems and includes the laboratory dissection. The course also includes a survey of the important families of fishes with emphasis on species of aqua cultural significance. Students use taxonomic keys to identify individual species and become familiar with life histories and evolutionary adaptations.

AQT 2023 - 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.

ARA - Arabic

ARA 1001 - 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.

ARA 1002 - Conversational Arabic II (3)
Continues the sequence for students who wish to understand and speak Arabic. Covers basic conversational patterns, expressions, and grammar.

ARA 1011 - Arabic Language I (5)
Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the Arabic language.

ARA 1012 - 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.

Prerequisite: ARA 1011.

ARA 2011 - Arabic Language III (3)
Continues Arabic Language II in the development of increased functional proficiency at the intermediate level in speaking, aural comprehension, reading, writing, and cultural competency in the Arabic language. This course is conducted predominantly in Arabic.

Prerequisite: ARA 1012.

ARM - Army ROTC

ARM 1011 - Adventures in Leadership I (2)
Introduces the fundamentals of leadership and the United States Army. Includes Army leadership doctrine, team-building concepts, time and stress management, and an introduction to cartography and land navigation, marksmanship, briefing techniques, and basic military tactics. Includes lecture and laboratory.

ARM 1012 - Adventures in Leadership II (2)
Investigates leadership in small organizations. Covers basic troop leading procedures, military first aid and casualty evacuation concepts, creating ethical work climates, an introduction to Army organizations and installations, and basic military tactics. Introduces students to effective military writing styles. Includes lecture and laboratory.

Prerequisite: ARM 1011.

ARM 2011 - Methods of Leadership & Management I (3)
Reviews leadership and management concepts including motivation, attitudes, communication skills, problem solving, human needs and behavior, and leadership self-development. Students refine written and oral communications skills and explore the basic branches of the Army, and officer and NCO duties. Students conduct practical exercises in small unit light infantry tactics and perform as mid-level leaders in the cadet organization. Includes lecture and laboratory.

Prerequisite: ARM 1012.

ARM 2012 - Methods of Leadership & Management II (3)
Focuses on leadership and management functions in military and corporate environments. Studies various components of Army leadership doctrine to include the four elements of leadership, leadership principles, risk management and planning theory, the be-know-do framework, and the Army leadership evaluation program. Continue to refine communication skills. Includes lecture and laboratory.

Prerequisite: ARM 2011.

ART - Art

ART 1001 - Color Theory (3)
Explores the properties and concepts of color for application in fine art, commercial art and/or applied arts using various traditional fine art techniques and materials.

ART 1002 - 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.

ART 1003 - 3-D Design (3)
Introduces the fundamentals of three-dimensional design, form, and space. The course applies the elements and principles of design to three-dimensional problems.

ART 1005 - 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.

ART 1006 - Digital Art Foundations II (3)
Reviews and further explores the process of generating design utilizing a variety of digital tools. In this course, students will develop their proficiency with the digital tools and learn more advanced techniques in drawing and painting. Students will develop and evaluate their design-oriented projects using the elements and principles. Portfolio development, strong content, and a blending of a variety of computer art applications will be emphasized.

Prerequisite: ART 1005.

ART 1110 - Art Appreciation: GT-AH1 (3)
Introduces the cultural significance of the visual arts, including media, processes, techniques, traditions, and terminology. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

ART 1111 - Art History Ancient to Medieval: GT-AH1 (3)
Provides the knowledge base to understand the visual arts, especially as related to Western culture. This course surveys the visual arts from the Ancient through the Medieval periods. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

ART 1112 - Art History Renaissance to 1900: GT-AH1 (3)
Provides the knowledge base to understand the visual arts, especially as related to Western culture. This course surveys the visual arts from the Renaissance to 1900. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

ART 1113 - Art History 1900 to Present: GT-AH1 (3)
Introduces the concepts necessary to understand modern visual art, with an emphasis on world art of the 20th century. This course surveys world art of the 20th century, including Modernism to Post-Modernism. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

ART 1115 - History of Photography (3)
Surveys the history of photography from its beginnings to the present. This course emphasizes artistic movements and individual photographers who have made significant contributions to the field. Includes technical, artistic, social, and commercial development of photography as a form of visual communication.

ART 1116 - Museum Studies (3)
Provides an overview of the museum field. Covers the museum as a business, its history and role in society, and planning and implementation of a museum exhibition.

ART 1118 - 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.

ART 1201 - Drawing I (3)
Investigates the various approaches and media that students need to develop drawing skills and visual perception.

ART 1202 - Drawing II (3)
Explores expressive drawing techniques with an emphasis on formal composition, color media and content or thematic development.

Prerequisite: ART 1201.

ART 1203 - Figure Drawing I (3)
Introduces the basic techniques of drawing the human figure.

ART 1301 - 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.

ART 1302 - Painting II (3)
Further explores techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development.

Prerequisite: ART 1301.

ART 1303 - 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.

ART 1304 - 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.

ART 1401 - Digital Photography I (3)
Presents the fundamentals of Fine Art digital photography, including camera equipment and software used for image capture, management and manipulation. Topics include camera settings and exposure control, composition, working with light and time, and creative image manipulation.

ART 1402 - Darkroom Photography I (3)
Introduces black and white film photography as a fine art medium, and focuses on skills necessary for basic camera and darkroom lab operations.

ART 1403 - 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.

Prerequisite: ART 1401.

ART 1404 - Color Photography I (3)
Covers the fundamentals of color photography such as color theory and light, production, processing and printing color negatives.

Prerequisite: ART 1401.

ART 1501 - 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.

ART 1502 - Printmaking II (3)
Introduces more advanced techniques and skills of printmaking as a fine art media. Instruction includes an understanding of visual concepts as they relate to prints. May include introduction to relief, intaglio, lithography and screen-printing techniques.

Prerequisite: ART 1501.

ART 1601 - Sculpture I (3)
Introduces the fundamentals of sculpture such as modeling, casting, carving, and the processes of assemblage.

ART 1602 - Sculpture II (3)
Develops an understanding and focus on manipulation of three-dimensional form, with greater concentration on individual creativity and style.

Prerequisite: ART 1601.

ART 1604 - Jewelry and Metalwork I (3)
Introduces metalsmithing techniques and design used for jewelry and small-scale sculptural objects. This course introduces fabrication and forming techniques such as soldering, forming, hollow construction, cold connections, surface treatment, finishing processes, and basic stone setting. This course includes generating and constructing functional jewelry and sculpture.

ART 1605 - Jewelry and Metalwork II (3)
Emphasizes conceptual design development, using casting and specialized techniques.

Prerequisite: ART 1604.

ART 1701 - Handbuilt Clay I (3)
Provides instruction in several methods of hand building and the study of functional and decorative design elements.

ART 1702 - Handbuilt Clay II (3)
Provides continued instruction in various methods of hand building.

Prerequisite: ART 1701.

ART 1703 - Ceramics I (3)
Introduces traditional and contemporary approaches to ceramic form and processes, with an emphasis on hand building techniques, and a basic introduction to the potter's wheel. This course includes basic surface design, glaze, and kiln firing procedures.

ART 1704 - Ceramics II Wheel Throwing (3)
Course covers ceramic wheel throwing and explores intermediate-level traditional and contemporary approaches to ceramic form and processes. This course emphasizes wheel throwing techniques and forms. It covers additional development of surface design, glazing, glaze formulation, and kiln firing procedures.

Prerequisite: ART 1703.

ART 1705 - 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.

ART 1801 - 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.

ART 1802 - Fiber Design II (3)
Continues instruction in fiber design (ART 1801 Fiber Design I).

Prerequisite: ART 1801.

ART 2201 - Drawing III (3)
Offers a continued study of expressive drawing techniques and development of individual style, with an emphasis on composition and technique variation.

ART 2202 - Drawing IV (3)
Explores advanced drawing problems with an emphasis on conceptual development and portfolio and/or exhibition quality presentation.

ART 2203 - 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.

ART 2301 - 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.

ART 2302 - 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.

ART 2304 - Advanced Figure Painting (3)
Offers continued study of painting the human figure with advanced problem solving in composition and experimentation with materials and techniques.

ART 2305 - 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.

ART 2401 - 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.

ART 2403 - Digital Photo Studio (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.

ART 2405 - 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.

ART 2407 - Landscape Photography (3)
Focuses on traditional and contemporary approaches to landscape photography. This course examines historic, technical, and aesthetic aspects of landscape photography.

ART 2408 - 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.

ART 2601 - Sculpture III (3)
Focuses on advanced individual sculpture projects, emphasizing experimentation with materials, accomplished technique and conceptual significance.

ART 2603 - Jewelry and Metalwork III (3)
Focuses upon advanced work and emphasizes experimentation with materials and techniques, individual designs, and superior craftsmanship.

ART 2604 - 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.

Prerequisite: ART 1605 or ART 2603.

ART 2701 - Handbuilt Clay III (3)
Provides instruction in several methods of hand building and the study of functional and decorative design elements.

ART 2703 - Ceramics III Molds and Casting (3)
Covers ceramic mold making and slip casting techniques and explores intermediate-level traditional and contemporary approaches to ceramic form and additional development of surface design, glazing, glaze formulations, and kiln firing procedures as it applies to molded and cast forms.

ART 2704 - Ceramics IV (3)
Explores advanced level ceramic form and surface design. This course includes advanced use of clay bodies, unique glazes, engobes, surface textures, and firing methods. Emphasis is placed on individual style and developing strategies to translate an idea into sculptural and functional forms.

Prerequisite: ART 1704 or ART 2703.

ASE - Auto Service Technology

ASE 1002 - Intro to the Automotive Shop (2)
Prepares the incoming automotive student to work in the shop safely and gain familiarity with the shop and common equipment.

ASE 1010 - Automotive Brake Service I (2)
Introduces the basic theory of automotive braking systems including operation, diagnosis, basic repair of disc and drum friction assemblies, and basic hydraulic braking systems. This course meets MLR/AST/MAST program accreditation requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1002. This course and ASE 1002 may be taken at the same time.

ASE 1011 - Automotive Brake Service II (2)
Covers diagnostics, test procedures, and repair to automotive foundation braking system. This course also introduces the components, types of Antilock Braking Systems (ABS), and traction control systems of current vehicles. This course meets MLR/AST/MAST program accreditation requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1010. This course and ASE 1010 may be taken at the same time.

ASE 1020 - Basic Automotive Electricity (2)
Introduces vehicle electricity, basic electrical theory, circuit designs, and wiring methods. This course focuses on multimeter usage and wiring diagrams. This course meets MLR/AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1002. This course and ASE 1002 may be taken at the same time.

ASE 1023 - Starting and Charging Systems (2)
Covers the operation and theory of a vehicle battery, testing, service, and repair of starting and charging systems including voltage testing, draw testing. This course meets MLR/AST/MAST program requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1020. This course and ASE 1020 may be taken at the same time.

ASE 1030 - General Engine Diagnosis (2)
Covers how to perform basic engine diagnosis to determine condition of engine including engine support systems. This course meets MLR/AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1002. This course and ASE 1002 may be taken at the same time.

ASE 1034 - Automotive Fuel & Emissions Systems I (2)
Focuses on the diagnosis and repair of automotive fuel emission control systems, filter systems, and spark plugs. This course also includes maintenance to Diesel Exhaust Fluid (DEF) systems.

Prerequisite: Prerequisite/Corequisite: ASE 1020. This course and ASE 1020 may be taken at the same time.

ASE 1040 - Suspension and Steering I (2)
Focuses on diagnosis and service of suspension and steering systems and components. This course meets MLR/AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1002. This course and ASE 1002 may be taken at the same time.

ASE 1041 - Suspension and Steering II (2)
Covers design, diagnosis, inspection, service of suspension, and steering systems used on light trucks and automobiles including power steering and Supplemental Restraint System (SRS) service. This course meets AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1040. This course and ASE 1040 may be taken at the same time.

ASE 1050 - Manual Drive Train & Axle Maintenance (2)
Covers the operating principles and repair procedures relating to axle-shafts, propeller shafts, and universal joints. This course meets MLR/AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1002. This course and ASE 1002 may be taken at the same time.

ASE 1051 - Man Trans/Transaxles/Clutches I (2)
Focuses on the diagnosis and repair of automotive manual transmissions, transaxles, clutches, and related components. This course meets AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1050. This course and ASE 1050 may be taken at the same time.

ASE 1060 - Automotive Engine Repair (2)
Focuses on the service of cylinder head, valve-train components, and cooling system components including engine removal, re-installation, and re-mounting systems. This course meets MLR/AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1002. This course and ASE 1002 may be taken at the same time.

ASE 1062 - Automotive Engine Service & Repair (2)
Covers engine sealing requirements and repair procedures including engine fasteners, bolt torque, repair of fasteners, cooling system, and basic engine maintenance. This course meets AST/MAST requirements.

Prerequisite: ASE 1002.

ASE 1091 - Automotive Engine Repair & Rebuild (4)
Focuses on the disassembly, diagnosis, and reassembly of the automotive engine including the diagnostic and repair procedures for the engine block and cylinder head assemblies. This course meets MAST requirements.

Prerequisite: ASE 1002.

ASE 1092 - Manual Transmission, Transaxles, Clutches II (3)
Focuses on the diagnosis and repair of automotive differentials, four-wheel drive units, and all-wheel drive units. This course meets MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1051. This course and ASE 1051 may be taken at the same time.

ASE 2010 - Automotive Power & ABS Brake Systems (2)
Covers the operation and theory of the modern automotive braking systems including the operation, diagnosis, service, and repair of the anti-lock braking systems and power assist units. This course also covers the machining operations of today's automobile brake systems. This course meets AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1011. This course and ASE 1011 may be taken at the same time.

ASE 2050 - Automatic Transmission/Transaxle Service (1)
Focuses on practical methods of maintaining, servicing, and performing minor adjustments on an automatic transmission and transaxle. This course meets MLR/AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1002. This course and ASE 1002 may be taken at the same time.

ASE 2051 - Automotive Transmission & Transaxle Repair (3)
Covers diagnosis, principles of hydraulics, principles of electronic components, power flow, theory of operation including removal, installation, and replacement of transmission/transaxle and components. This course meets AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 2050. This course and ASE 2050 may be taken at the same time.

ASE 2095 - Heating & Air Conditioning Systems (3)
Covers the diagnosis and service of vehicle heating and air conditioning systems and their components. This course meets AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 2064. This course and ASE 2064 may be taken at the same time.

ASE 2191 - Automotive & Diesel Body Electrical (3)
Provides a comprehensive study of the theory, operation, diagnosis, and repair of vehicle accessories. This course meets AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1023. This course and ASE 1023 may be taken at the same time.

ASE 2192 - Automotive Computers & Ignition Systems (3)
Focuses on the inspection and testing of typical computerized engine control and ignition systems. This course meets AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1020. This course and ASE 1020 may be taken at the same time.

ASE 2193 - Auto Fuel Injection & Emissions Systems II (3)
Focuses on the diagnosis and repair of electronic fuel injection systems and modern exhaust systems. This course meets AST/MAST requirements.

Prerequisite: Prerequisite/Corequisite: ASE 1034 and ASE 2192. This course and ASE 1034 and ASE 2031 may be taken at the same time.

ASE 2194 - Suspension & Steering III (3)
Covers operation of steering and power steering systems including different alignment types and procedures.

Prerequisite: Prerequisite/Corequisite: ASE 1041. This course and ASE 1041 may be taken at the same time.

ASL - American Sign Language

ASL 1101 - 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.

ASL 1102 - 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.

Prerequisite: ASL 1101.

ASL 1121 - 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.

ASL 1122 - 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. Students must complete this course with a `B` or higher or pass the ASL 1121 proficiency test at 80% or better prior to acceptance into the Interpreting and Transliterating Preparation program.

Prerequisite: ASL 1121, ASL 1122.

ASL 1123 - 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 1122 with more emphasis on expressive skills in signing.

Prerequisite: ASL 1122.

ASL 2221 - American Sign Language IV: GT-AH4 (3)
Continues to provide further study of American Sign Language (ASL) and its grammar, syntax and cultural features. This course helps develop intermediate-level competency and fluency in the language, and addresses variations in ASL.

Prerequisite: ASL 1123. Offered: *(GT-AH4).

ASL 2222 - American Sign Language V: GT-AH4 (3)
Focuses on increasing advanced intermediate-level proficiency in understanding and using American Sign Language (ASL).

Prerequisite: ASL 2221. Offered: *(GT-AH4).

ASL 2223 - American Sign Language VI (3)
Increases the use of grammatical features of ASL and introduces new grammatical features, such as the complex use of spatial structuring and register variations. This course includes the practice of communication effectiveness and cultural competence through social interactions with a variety of Deaf individuals.

Prerequisite: ASL 2222.

ASL 2243 - Discourse Analysis (3)
Introducing students to a systemic process for developing awareness of the various factors people use to express and negotiate meaning and applying this awareness to achieve deeper levels of understanding of meaning in various contexts.

Prerequisite: ASL 2222.

ASL 2244 - ASL Linguistics (3)
Investigates the structural properties of ASL including phonology, morphology, syntax, semantics, and discourse with a focus on how visual languages differ and are similar to spoken languages.

Prerequisite: ASL 2221. Corequisite: ASL 2222.

ASL 2245 - Ethics to the ASL Professions (3)
Focuses on the study and application of ethical standards and practices in American Sign Language (ASL) professions.

Prerequisite: ASL 1123.

AST - Astronomy

AST 1110 - Planetary Astronomy w/Lab: GT-SC1 (4)
Focuses on the history of astronomy, naked-eye sky observation, tools of the astronomer, contents of the solar system and life in the universe. Incorporates laboratory experience.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

AST 1120 - Stellar Astronomy w/Lab: GT-SC1 (4)
Emphasizes the structure and life cycle of the stars, the sun, galaxies, and the universe as a whole, including cosmology and relativity. Stellar phenomena including white dwarves, black holes will be explored. Incorporates laboratory experience.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

AST 1160 - Cosmology: GT-SC2 (3)
Explores the birth, large scale structure and eventual fate of the universe. The course will examine the evidence for, and science behind, the Big Bang and inflation, the expanding universe, dark matter and dark energy, and the possible futures of the universe as a whole. The rise of complex life in our universe, the anthropic principle and the theory of multiple universes will also be included. Unification theories may be covered. This course is approved as part of the Colorado Statewide Guaranteed Transfer curriculum: GT-SC2.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC2).

BIO - Biology

BIO 1004 - Biology: A Human Approach: GT-SC1 (4)
Develops a basic knowledge of the structure and function of the human body by studying the body's structure as a series of interrelated systems. Includes cardiovascular, respiratory, digestive, lymphatic, musculoskeletal, nervous, endocrine, reproductive and urinary systems, and genetics. Emphasizes disease prevention and wellness. This course includes laboratory experience. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

BIO 1005 - Science of Biology w/Lab: GT-SC1 (4)
Examines the basis of biology in the modern world and surveys the current knowledge and conceptual framework of the discipline. Explores biology as a science, a process of gaining new knowledge, and the impact of biological science on society. This course includes a laboratory experience. Designed for non-science majors. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

BIO 1006 - 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, Paramedic Program, and the Medical Office Technology program.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher.

BIO 1015 - 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.

BIO 1111 - General College Biology I w/Lab: GT-SC1 (5)
Examines the fundamental molecular, cellular and genetic principles characterizing plants and animals. Includes cell structure and function, and the metabolic processes of respiration, and photosynthesis, as well as cell reproduction and basic concepts of heredity. The course includes laboratory experience. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

BIO 1112 - General College Biology II w/Lab: GT-SC1 (5)
Continues Biology I. Includes ecology, evolution, classification, structure, and function in plants and animals. Includes laboratory experience. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

BIO 2101 - Human Anatomy & Physiology I w/Lab: GT-SC1 (4)
Focuses on an integrated study of the human body including the histology, anatomy, and physiology of each system. Examines molecular, cellular, and tissue levels of organization plus integuments, skeletal, articulations, muscular, and nervous systems. Includes a mandatory hands-on laboratory experience covering microscopy, observations, and dissection. This is the first semester of a two-semester sequence. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: ENG 1021 or ENG 1022. These courses may be taken at the same time. Offered: *(GT-SC1).

BIO 2102 - Human Anatomy & Physiology II w/Lab: GT-SC1 (4)
Focuses on the integrated study of the human body and the histology, anatomy, and physiology of the following systems and topics: endocrine, cardiovascular, hematology, lymphatic and immune, urinary, fluid and electrolyte control, digestive, nutrition, respiratory, reproductive, and development. Includes a mandatory hands-on laboratory experience involving microscopy, observations, and dissection. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: BIO 2101. Offered: *(GT-SC1).

BIO 2103 - Advanced Human Anatomy (2)
Examines the gross anatomical structure of the human body and the relationship between form and function. Students will dissect a human cadaver. Systems covered will include integument, digestive, respiratory, skeletal, muscular, reproductive, endocrine, lymphatic, urinary, nervous and cardiovascular. This is a course designed for allied health, education, biology and other students who wish to obtain advanced knowledge of human anatomy. Requires hands-on laboratory experience.

Prerequisite: BIO 2101 and. Corequisite:
Prerequisite/Corequisite: BIO 2102.

BIO 2104 - Microbiology w/Lab: GT-SC1 (4)
Covers the diversity of microorganisms, their structure, physiology, and the identification process. There is an emphasis on microorganisms that cause infectious disease and the process of infection, host immune responses, and methods to control microorganisms. Laboratory experiences include culturing, identifying, and controlling microorganisms. This course is designed for students pursuing a health science field. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: ENG 1021 or ENG 1022. These courses may be taken at the same time. Offered: *(GT-SC1).

BIO 2108 - General College Microbiology w/Lab: GT-SC1 (5)
Designed for biology and health science majors. Surveys microorganisms with an emphasis on their structure, development, physiology, classification, and identification. Includes microbial diversity, functional anatomy, biochemistry, genetics, ecology, and disease. Mandatory hands-on laboratory experience covers sterile technique, microscopy, culture procedures, and biochemical and genetic analysis. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SC1).

BIO 2111 - Cell Biology with Lab (5)
Provides an intensive study of the cell and its organelles. Emphasis will be on the molecular mechanisms involved in cell communication, metabolism, motility, genetics, growth, and

reproduction. This course requires hands-on laboratory experience.

Prerequisite: BIO 1111.

BIO 2116 - Pathophysiology (4)
Focuses on the alterations in physiological, cellular, and biochemical processes, the associated homeostatic responses, and the manifestations of disease. Prior knowledge of cellular biology, anatomy, and physiology is essential for the study of pathophysiology.

Prerequisite: BIO 2101 and . Corequisite:
Prerequisite/Corequisite: BIO 2102.

BIO 2121 - Botany w/Lab: GT-SC1 (5)
Studies nonvascular and vascular plants, emphasizing photosynthetic pathways, form and function, reproduction, physiology, genetics, diversity, evolution, and ecology. This course requires mandatory hands-on laboratory and field experience. This course is designed for biology majors. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: BIO 1112 or NRE 1100 or HLT 1101. Offered: *(GT-SC1).

BIO 2122 - 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.

Prerequisite: BIO 1112 or NRE 1100.

BIO 2124 - Genetics: GT-SC1 (4)
Studies the fundamental laws of heredity and their application to living organisms. Covers the basics of genetics. Focuses on the laws of Mendel, linkage, mutation concept, molecular genetics, and the Hardy-Weinberg law. Includes a laboratory experience. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: BIO 1111. Offered: *(GT-SC1).

BUS - Business

BUS 1002 - Entrepreneurial Operations (3)
Explores the essential requirements for starting and operating a business. This course covers basic concepts of business law, marketing, finance and operations. It guides the development of an effective business plan and prepares students to launch and sustain their own businesses.

BUS 1015 - Introduction to Business (3)
Introduces the application of fundamental business principles to local, national, and international forums. This course examines the relationship of economic systems, governance, regulations, and law upon business operations. It surveys the concepts of career development, business ownership, finance and accounting, economics, marketing, management, operations, human resources, regulations, and business ethics.

BUS 1016 - Personal Finance (3)
Surveys the basic personal finance needs of most individuals and introduces the personal finance tools useful in planning and instituting a successful personal financial philosophy. The course emphasizes the basics of budgeting, buying, saving, borrowing, career planning, investing, retirement planning, estate planning, insurance, and income taxes.

BUS 1020 - Introduction to E-Commerce (3)
Provides an introduction to electronic commerce and the business trends in the dynamic e-commerce environment. This course covers the definition of e-commerce, technology and software requirements, security issues, electronic payment and marketing strategies. This course focuses on what to expect in business-to consumer (B2C) and business-to-business (B2B) e-commerce markets when creating an e-business.

BUS 2001 - Business Logistics Optimization (3)
Addresses and explores the principles of business logistics and optimization, utilizing database management systems and software. Students will construct and evaluate models of business systems for transportation, fleet and asset tracking, distribution and supply, and warehousing. Emphasizes decision analysis for logistics efficiency.

BUS 2002 - Purchase and Supply Logistics (3)
Assesses the skills and abilities needed for the processes and activities for sourcing materials necessary for a business to deliver goods and services. An emphasis on the ability to formulate and manage the sourcing activities of purchasing supply, and sourcing logistics. The skills and fundamental comprehension for evaluating the sourcing of materials will be applied to business processes. Emphasizes decision analysis for logistics efficiency of purchasing, supply and sourcing.

BUS 2003 - Introduction to International Business (3)
Provides an understanding of the fundamental nature of international business. This course will cover the development of international business; theories and methods of international trade; financing mechanisms and terms used in export documentation and export finance; effects of economic, political and cultural environment on international business and trade; impact of geography on business transactions; impact of legal systems of international business; and developing an effective international marketing strategy.

BUS 2016 - 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 given to economic regulation, social regulation, labor-management issues, environmental issues, and contract fundamentals. This course analyzes the role of law in social, political, and economic change business environments.

BUS 2017 - Business Communications and Report Writing (3)
Emphasizes effective business writing and cover letters, memoranda, reports, application letters, and resumes. This course includes the fundamentals of business communication and an introduction to international communication.

BUS 2018 - Legal Environment of Business II (3)
Focuses on legal statutes that regulate business and consumers. This course examines the legal entities of business organizations including formation, governance, and applications. The techniques of commercial transactions and negotiations will be developed with business entities for the successful promotion of commerce. Corporate responsibility, it's role in ethical decision-making, and its application of law and regulation will be analyzed.

BUS 2026 - Business Statistics (3)
Focuses on statistical study, sampling, organizing and visualizing data, descriptive statistics, probability, bi-nominal distributions, normal distributions, confidence intervals, linear regression, and correlation. Intended for business majors.

BUS 2078 - Seminar/Workshop (2)
Provides students with an experiential learning opportunity.

BUS 2081 - Internship (2)
Provides continued instruction and the opportunity for students to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

BUS 2089 - Capstone (2)
Demonstrates the culmination of learning within a given program of study.

CAD - Computer-Aided Drafting

CAD 1100 - Print Reading for CAD (3)
Covers linetype identification, use of lineweights, file management, prototype/template creation using AutoCAD. Covers interpretation of industry standards in dimensioning, symbology, drawing notes, scales, and reading working drawings. Architecture, engineering, design related, civil/survey, manufacturing, HVAC, and welding are industries discussed in this course.

CAD 1101 - Computer-Aided Drafting/2D I (3)
Focuses on basic computer aided drafting skills using the AutoCAD software. Includes file management, Cartesian coordinate system & dynamic input, drawing templates, drawing aids, linetype and lineweights, layer usage, drawing & editing geometric objects, polylines & splines, array, text applications, creating tables, basic dimensioning, and Help access.

Prerequisite: Prerequisite/Corequisite: CAD 1100 or HLT 1030.

CAD 1102 - Computer-Aided Drafting/2D II (3)
Focuses on intermediate 2D computer aided drafting skills using the AutoCAD software. Includes blocks, wblocks & dynamic blocks, hatching, isometric drawings, advanced dimensioning and dimension variables, layouts, paper space and viewports, templates, external references, attributes, raster images, and printing/plotting.

Prerequisite: Prerequisite/Corequisite: CAD 1101.

CAD 1110 - Sketchup (3)
Introduces techniques and common practices of 3D modeling using Sketchup software. Focuses on the creation and editing of virtual three-dimensional forms and volumes and the organization of their elements through the various features of the software. Includes applying material and textures, changing the appearance of models with styles and shadows and introduces the basic techniques of presenting and sharing the 3D model.

CAD 1113 - Chief Architect (3)
Introduces residential and light commercial software design in order to produce 3D models and construction documents using the software Chief Architect.

CAD 2080 - Internship (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

CAD 2089 - Capstone (3)
Provides a demonstrated culmination of learning within a given program of study.

CAD 2204 - AutoCAD Architecture/Software (3)
Provides students with the Computer Aided Software (CAD) software application training in Architectural construction drawings using industry standards. Includes creating floor plans, sections, elevations and details necessary to produce 2D Architectural construction drawings.

Prerequisite: CAD 1101.

CAD 2210 - Advanced Sketchup (3)
Introduces students to advanced techniques and workflows of 3D modeling and explores various presentation techniques using SketchUp Pro. It includes solid tools, dynamic components, import and export of 2D and 3D data to other formats, extensions, integrated rendering programs, and generating animations and phased-assembly sequences using advanced software features.

Prerequisite: CAD 1110.

CAD 2220 - Revit Architecture (3)
Introduces students to the AutoDesk Revit Architecture software. Examines the Building Information Modeling approach to 2D and 3D architectural construction documents. Covers the creation of floorplans, elevations, sections, 3D models, perspective renderings and walkthroughs with this software application.

CAD 2221 - Advanced Revit Architecture (3)
Focuses on the advanced applications of the AutoDesk Revit Architecture software. Includes Family Editing, Topographic Site Plans, Worksharing, Phases, Key Schedules, Custom Annotation, Templates, and Presentation Techniques.

Prerequisite: Prerequisite/Corequisite: CAD 2220. This course and CAD 2220 may be taken at the same time.

CAD 2224 - Revit Structure (3)
Introduces structural steel modeling and building information modeling (BIM). Steel Structures, Foundation, Framing Systems, Elevator Shafts, Stairs, Ramps, and Drawing Annotation including Details and Schedules are covered.

Prerequisite: CAD 2220 and AEC 1232.

CAD 2332 - Civil 3D (Software) (3)
Provides students with the basics to advanced software application necessary to produce 3D Civil models and 2D drawings using the Civil 3D software. This course will cover topics including components and program interface, linework, geometry, 2D to 3D Civil CAD applications.

CAD 2400 - Computer-Aided Drafting/3D (3)
Focuses on construction of three-dimensional objects using the AutoCAD software. Includes mesh & surface modeling, solid modeling, extrusions, Boolean operations, 3D editing, 3D views,

rendering, materials, advanced lighting, and walkthrough, flyby animations of 3D Solids to 2D Layouts.

Prerequisite: CAD 1101.

CAD 2402 - Computer-Aided Drafting/Custom (3)
Focuses on program customization of AutoCAD software. Includes the creation of Dynamic Blocks, customizing Shortcut Menus and Double Click Actions, customizing Tool Palettes, Ribbon Tabs and Panels, User Profiles and Workspaces, basic CAD programming, path options, Sheet Set Manager, and eTransmit.

Prerequisite: CAD 1101.

CAD 2455 - SolidWorks/Mechanical (3)
Introduces parametric feature-based solid modeling 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.

CAD 2456 - Advanced Solidworks (3)
Introduces advanced applications of the 3D parametric software SolidWorks. Focuses include management of design data, advanced assembly, analysis of model creations, documentation of bill of materials and parts lists, rendering, animation, and dynamic simulation and testing a model assembly.

Prerequisite: CAD 2455.

CAD 2458 - Introduction to Creo Basics (3)
Introduces basic Creo software, a 3D Parametric Solid modeling program, and its operations such as part, assembly, and drawing creation. The course includes hot to construct, modify, and manage complex parts in 3D space as well as produce 2D drawings from the 3D models.

CAD 2460 - Inventor I/Autodesk (3)
Introduces basic Inventor applications of non-parametric modeling, three-dimensional parametric modeling and visualization & animation of 3D modeling. The student learns to construct, modify, and manage complex models in 3D space. Produces 2D drawing assemblies from 3D models.

Prerequisite: EGT 1101 & CAD 1102.

CAD 2461 - Advanced Inventor (3)
This course focuses on the advanced applications of the parametric software Inventor. Includes management of design data, advanced assembly and analysis of model creations and constraints, documentation of bill of materials and parts lists, rendering and animation and testing a model assembly.

Prerequisite: CAD 2460.

CAD 2464 - Fusion/AutoDesk (3)
Focuses on parametric modeling and direct manipulation modeling techniques to create 3D designs using the Fusion software.

Prerequisite: CAD 1100.

CAD 2540 - 3DS MAX (3)
Introduces 3D model creation and editing, rendering and animation using the AutoDesk 3DS Max software. Focuses on 3D geometry, texture mapping, lighting, camera placement, shading, photo-realistic rendering, animation techniques, and walk through animations.

Prerequisite: CAD 1101.

CAD 2541 - Advanced 3DS MAX Character Modeling (3)
Focuses on advanced 3D geometry and character construction, animation and rendering techniques using Autodesk 3D Max software. Emphasis will include 3D geometry manipulation, character/bone/biped constructions, animation and video post-production of 3D animations.

Prerequisite: CAD 2540.

CAD 2543 - Advanced 3DS MAX Architectural Visualization (3)
Introduces techniques for architectural visualization using 3DS Max. Focuses include establishing workflows, advanced texturing, modeling, rendering, and animation techniques for architectural visualization.

Prerequisite: CAD 2540.

CAD 2660 - 3D Printing (3)
Provides the student with the ability to blend the virtual and real design worlds together through the use of 3D CAD Modeling, and 3D Printing.

Prerequisite: Prerequisite/Corequisite: CAD 1110 or CAD 2455.

CAD 2661 - Advanced 3D Printing (3)
Provides the student with the ability to create Advanced 3D solid models using 3D printing and 3D scanning technology and various CAD software programs.

Prerequisite: CAD 2660.

CAD 2667 - AR and VR in CAD (1)
Explores the current and emerging technology and concepts involving augmented and virtual reality (AR/VR) in the computer-aided drafting and design industries. This course presents AR and VR content for three-dimensional presentation.

CAD 2694 - 3D Scanning and Modeling (4)
Exposes students to 3D scanning and modeling. Students will manipulate various types of 3D scanning technology and create CAD models using scanning software and other CAD programs.

CHE - Chemistry

CHE 1005 - Chemistry in Context w/Lab: GT-SC1 (5)
Covers the study of measurements, matter, molecules, atoms, chemical bonding, nomenclature, energy, acids, bases, and nutrition. Course work examines chemistry in the modern world and surveys the current knowledge as well as the conceptual framework of the discipline. Chemistry as a science is explored, as is the impact of chemistry on society. This course includes laboratory experience and is designed for non-science majors.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

CHE 1009 - General, Organic, & Biochemistry (4)
Focuses on fundamentals of inorganic, organic and biochemistry primarily for students in health science, non-science majors and/or students in the occupational and health related career areas. Includes the study of measurement, atomic theory, chemical bonding, nomenclature, stoichiometry, solutions, acid and base chemistry, gas laws, condensed states of matter and nuclear chemistry, nomenclature of organic compounds,

properties of different functional groups, nomenclature of various biological compounds, their properties and biological pathways.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher.

CHE 1011 - Intro to Chemistry I w/Lab: GT-SC1 (5)
Includes the study of measurements, atomic theory, chemical bonding, nomenclature, stoichiometry, solutions, acid and base, gas laws, and condensed states. Laboratory experiments demonstrate the above concepts qualitatively and quantitatively. Designed for non-science majors, students in occupational and health programs, or students with no chemistry background.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

CHE 1012 - Intro to Chemistry II w/Lab: GT-SC1 (5)
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. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1.

Prerequisite: CHE 1011 and College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SC1).

CHE 1111 - General College Chemistry I w/Lab: GT-SC1 (5)
Focuses on basic chemistry and measurement, matter, chemical formulas, reactions and equations, stoichiometry. This course covers the development of atomic theory culminating in the use of quantum numbers to determine electron configurations of atoms, and the relationship of electron configuration to chemical bond theory. The course includes gases, liquids, and solids and problem-solving skills are emphasized through laboratory experiments.

Prerequisite: CHE 1011 and. Corequisite: Prerequisite/Corequisite: MAT 1340 and ENG 0090, ENG 0094, or ENG 1021. Offered: *(GT-SC1).

CHE 1112 - General College Chemistry II w/Lab: GT-SC1 (5)
Presents concepts in the areas of solution properties, chemical kinetics, chemical equilibrium, acid-base and ionic equilibrium, thermodynamics, and electrochemistry. This course emphasizes problem solving skills and descriptive contents for these topics. Laboratory experiments demonstrate qualitative and quantitative analytical techniques.

Prerequisite: CHE 1111 and MAT 1340. Offered: *(GT-SC1).

CHE 2105 - Introductory Organic Chemistry w/Lab (5)
Focuses on compounds associated with the element carbon, their reactions, and synthesis. Includes structure, physical properties, reactivities, synthesis and reactions of aliphatic hydrocarbons and selected functional group families including alcohols, ethers, aromatics, aldehydes, ketones, amines, amides, esters, and carboxylic acids. Covers nomenclature, stereochemistry, and reaction mechanisms. Includes reactions and reaction mechanisms of aromatic compounds. Designed for students needing one semester of organic chemistry.

Prerequisite: CHE 1011 or CHE 1111.

CHE 2111 - Organic Chemistry I w/Lab (5)
Focuses on compounds associated with the element carbon including structure and reactions of aliphatic hydrocarbons and selected functional group families. The course covers nomenclature of organic compounds, stereochemistry, and reaction mechanisms such as SN1, SN2, E1 and E2. Laboratory experiments demonstrate the above concepts plus the laboratory techniques associated with organic chemistry.

Prerequisite: CHE 1112.

CHE 2112 - Organic Chemistry II w/Lab (5)
Explores the chemistry of carbon-based compounds, their reactions and synthesis including the structure, physical properties, reactivities, and synthesis of organic functional groups not covered in Organic Chemistry I. The course explores functional groups including alcohols, ethers, aromatics, aldehydes, ketones, amines, amides, esters, and carboxylic acids and the reactions and reaction mechanisms of aromatic compounds. An introduction to biochemical topics may be included if time permits. Laboratory experiences demonstrate the above concepts and the laboratory techniques associated with organic chemistry.

Prerequisite: CHE 2111.

CHI - Chinese

CHI 1001 - 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.

CHI 1002 - Conversational Chinese II (3)
Continues the sequence for students who wish to understand and speak Chinese. Covers basic conversational patterns, expressions, and grammar.

Prerequisite: CHI 1001.

CHI 1011 - 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.

CHI 1012 - 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.

Prerequisite: CHI 1011.

CHI 2011 - Chinese Language III (3)
Continues Chinese Language II in the development of increased functional proficiency at the intermediate level in speaking, aural comprehension, reading, writing, and cultural competency in the

Chinese language. This course is conducted predominantly in Chinese.

Prerequisite: CHI 1012.

CIS - Computer Information Systems

CIS 1009 - Management Software: Using AVImark (1)
Introduces the use of computer management software and the concepts of software applicable to various technology programs. Covers features of selected software, terminology related to hardware, software and online resources (which include PC, word processing, databases, spreadsheets and email). Provides opportunities for practical application of computer skills.

CIS 1015 - Introduction to Computer Information Systems (3)
Provides an overview of computer information systems and their role in society. This course emphasizes terminology and the identification of computer components and systems used in personal and business environments. This course discusses the evaluation of systems and measures that can be applied to protect them.

CIS 1018 - Introduction to PC Applications (3)
This course introduces basic computer terminology, file management, and PC system components. Provides an overview of office application software including word processing, spreadsheets, databases, and presentation graphics. Includes the use of a web browser to access the Internet.

CIS 1020 - Technology for Career Development (1)
Prepares students to actively pursue a career path. This course will emphasize awareness of career opportunities through the use of career assessment tools, academic advising and career professionals. It will provide students with skills assessment tools, professional development activities, and information for creating and maintaining an electronic career portfolio.

CIS 1028 - Operating System: Linux & Windows (3)
Introduces the purpose, function, and configuration of an operating system. Skills covered will include the ability to write scripts, modify configurations, modify environment settings, and configure interfaces.

CIS 1035 - Complete Word Processing (3)
Introduces basics of word processing software to create, edit, format, and print documents as well as advanced features to enhance documents. This course includes working with images, creating/using styles, formatting multi-page documents using advanced features of headers/footers and section breaks, integrating software to create and format tables and charts, using mail merge, and creating documents with columns.

CIS 1045 - Intro to Desktop Database (3)
Explores an array of database skills. Includes table, query, form, and report creation and modification. Also includes application integration.

CIS 1055 - Complete Spreadsheets (3)
Introduces basic to advanced features of spreadsheet software to design and create accurate, professional worksheets for use in business and industry. The course includes entering data, creating formulas, professional formatting, creating charts, creating, sorting and filtering tables, creating and using templates, applying built-in functions, creating pivot tables, applying “what-if analysis” with data tables, creating macros, and using solver features.

CIS 1067 - Desktop Publishing (3)
Introduces the concepts and applications for desktop publishing. Emphasizes page layout and design with techniques for incorporating text and graphics and final production of printed documents.

CIS 2002 - Automated Project Management (3)
Provides an in-depth exploration of project management concepts and techniques. Uses software to automate project management processes. Emphasizes critical thinking, goal setting, and communication with team members, management, and customers. Real-world scenarios will be used to create task lists, assign and level resources, and modify project files. GANTT charts, critical path methodology, PERT, project tracking and reporting will be utilized in the management of projects.

Prerequisite: (CIS 1018 or CIS 1035) and CIS 1055.

CIS 2018 - Advanced PC Applications (3)
Emphasizes solving business problems by integrating data from all of the software applications that facilitate the production of useful information. Advanced capabilities of a PC software applications suite are utilized. Printed documents, reports, slides, and forms are produced to communicate information.

CIS 2040 - 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.

CIS 2043 - Introduction to SQL (3)
Introduces students to Structured Query Language (SQL). Students learn to create database structures and store, retrieve and manipulate data in a relational database. Students create tables and views, use indexes, secure data, and develop stored procedures and triggers.

Prerequisite: CIS 1045 or CIS 2040.

CIS 2046 - 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.

Prerequisite: CIS 1045 or CIS 2040.

CIS 2054 - Database Form Generation (4)
Introduces building forms that connect to a relational database. Skills include object navigation, layout editing, and form rendering.

Prerequisite: CIS 1045 or CIS 2040.

CIS 2056 - Database Report Generation (3)
Introduces publishing reports that connect to a relational database. Skills covered will include object navigation, layout editing, formatting from several data sources and report generation in various styles.

Prerequisite: CIS 1045 or CIS 2040.

CIS 2067 - 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.

CIS 2068 - 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.

CIS 2080 - Internship (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business locations and with the direct guidance of the instructor.

Prerequisite: To be determined by the program director.

CNG - Computer Networking

CNG 1020 - A+ Certification Preparation (4)
Prepares students for the CompTIA A+ certification examination. PC hardware and operating system installation, configuration and troubleshooting are practiced and reviewed using A+ techniques.

CNG 1024 - 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.

CNG 1025 - 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.

Prerequisite: Prerequisite/Corequisite: CNG 1024.

CNG 1029 - Wireless LAN Fundamentals (3)
Implement and troubleshoot Wireless Local Area Networks (WLANs). This course includes WLAN planning, design, installation, and configuration; WLAN security issues and vendor interoperability strategies; and mobile technology.

CNG 1031 - Principles of Information Assurance (3)
Provides skills and knowledge required to survey key issues associated with protecting information assets, determine the levels of protections and responses to security incidents, and design a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. Students learn to inspect and protect information assets, detect and react to threats to information assets, and examine pre- and post-incident procedures, and technical and managerial responses. Students learn about information security planning and staffing functions.

CNG 1032 - Network Security Fundamentals (3)
Delivers a comprehensive overview of network security, including general security concepts. Communication Security is studied, including remote access, e-mail, the Web, directory and file transfer, and wireless data. Common network attacks are introduced. Cryptography basics are incorporated, and operational/organizational security is discussed as it relates to physical security, disaster recovery, and business continuity. Computer forensics is introduced.

CNG 1033 - Firewalls/Network Security (3)
Teaches students the basics of network firewall security. It covers basic installation techniques, discusses how to make an intelligent choice of firewall technology, and presents basic firewall troubleshooting.

Prerequisite: Prerequisite: CNG 1032.

CNG 1036 - Guide to IT Disaster Recovery (3)
Presents methods to identify technology and communication infrastructure vulnerabilities and appropriate countermeasures to prevent and mitigate failure risks for an organization. The course will take an enterprise-wide approach to developing a disaster recovery plan.

CNG 1042 - Intro to Cloud Computing (3)
Educates students on the differences between today's PC/server-based networks and cloud computing. Students investigate the benefits of cloud computing, cloud models and solutions, and deployment methods. Students study hardware, storage, thin clients and virtualization in the cloud. The course also introduces students to cloud applications and cloud-based office productivity software. Students learn how they can apply cloud computing to address corporate information technology challenges.

CNG 2001 - Linux Configuration: (OS) (3)
Install a Linux operating system (OS). Configure and manage OS using command line interface (CLI) and text editor. Topics include installation and configuration of updates, services, file system, users and groups, file and folder permissions, networking, and remote access.

CNG 2002 - Unix/Linux Server Administration (3)
Provides students with the knowledge and skills required to configure, administer and secure data, users and services in a UNIX or Linux server environment. Emphasis will be on command-line interface (CLI). Topics will also include system monitoring, performance tuning, troubleshooting and interoperability with Windows servers and clients.

Prerequisite: CNG 2001.

CNG 2003 - Advanced Linux Server Administration (3)
Administer a Linux multi-server environment by building on previous Linux server environment knowledge. Emphasizes remote access to servers, and automation of system administrative tasks using shell scripts with advanced features and higher-level language (HLL).

Prerequisite: CNG 2001 and CNG 2002.

CNG 2011 - Windows Configuration: (OS) (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 OS in a variety of network operating system environments.

Prerequisite: CNG 1024.

CNG 2012 - Configuring Windows Server (4)
Provides students with the knowledge and skills that are required to install and configure a Microsoft Windows Server. This course helps prepare students for a MTA (Microsoft Technology Associate) and/or MCSA (Microsoft Certified Solutions Associate) exams.

Prerequisite: CNG 1024.

CNG 2013 - Administering Windows Server (4)
Provides students with the knowledge and skills required to administer Microsoft Windows Servers. This course helps prepare students for the current MCSA (Microsoft Certified Solutions Associate) exam.

Prerequisite: Prerequisite/Corequisite: CNG 2012.

CNG 2014 - Adv Windows Server Admin (4)
Provides students with advanced knowledge and skills to configure and administer Windows Server infrastructure. This course helps prepare students for the current MCSA (Microsoft Certified Solutions Associate) exam.

Prerequisite: CNG 2013.

CNG 2015 - Windows Automation: X (3)
Instructs students in Windows automation using command line or Powershell. Student will build on previous server environment knowledge to learn command line utility and/or Powershell cmdlets, and develop scripting skills for automating administrative tasks in a Windows environment.

CNG 2020 - IT Service Management: Framework (3)
Provides the knowledge and skills of Information Technology (IT) service management with focus on aligning IT services with the needs of business. This course will cover the key elements, concepts and terminology used in the IT service lifecycle, including the links between lifecycle stages, the processes used and their contribution to service management practices.

CNG 2030 - Fast Track CCNA 1 and 2 (5)
Presents the first of two parts of a CCNA (CISCO Certified Network Associate) certification preparation course for students that already have a solid networking background. It consists of internetworking, internet protocols, IP subnetting, introduction to the Cisco IOS, IP routing, EIGRP (Enhanced Interior Gateway Routing Protocol), and OSPF (Open Shortest Path First).

Prerequisite: CNG 1025.

CNG 2031 - 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 (Variable Length Subnet Masking), Layer 2 switching, VLANs (Virtual Local Area Network), ACLs (Access Control List), and other advanced routing concepts.

Prerequisite: CNG 2030.

CNG 2032 - Managing LAN Switches (3)
Prepares students to build, configure, and manage switches in a LAN with emphasis on vendor interoperability.

CNG 2033 - Routers and Routing Protocols (3)
Prepares students to build, configure, and manage routers and routing protocols with emphasis on vendor interoperability.

CNG 2040 - Virtual Environment Admin (3)
Build and administer a hypervisor environment. Includes building of virtual machine (VM) infrastructure and skills such as patching, backing up and securing of both hypervisor and virtual machines.

CNG 2041 - Information Storage and Management (3)
Teaches students to configure, manage, and backup data using current information storage technologies.

CNG 2042 - Cloud Computing (3)
Installs, configures and manages a cloud environment. Builds on knowledge of hypervisor and virtual machine environments.

CNG 2043 - Cloud Security and Cyber Law (3)
Introduces concepts of cloud architecture, cloud security, and the law as it pertains to cloud deployment. Focuses on the mechanics of security in the cloud service models: Infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS).

Prerequisite: CNG 1032 or CNG 1042.

CNG 2054 - Data Encryption (3)
Exposes the student to data encryption models. Examines the differences between data storage including Microsoft, Novell Netware and UNIX. Includes encryption and data transmission. Covers encryption over various networks including the Internet.

Prerequisite: CNG 1032.

CNG 2056 - Vulnerability Assessment I (3)
Presents students with an introduction to vulnerability assessment. Vulnerability assessment skills are necessary to understand how companies address vulnerabilities in the business environment. Students gain a better understanding of how information technology security integrates into the corporate world and how a balance must be achieved between security and functionality.

Prerequisite: CNG 1032 or CNG 2001.

CNG 2057 - Network Defense & Counter Measures (3)
Examines the tools, techniques and technologies used in the technical securing of information assets. This course provides in-depth information of the software and hardware components of Information Security and Assurance. Topics include firewall configurations, hardening Unix and NT servers, Web and distributed systems security and specific implementation of security modes and architectures. The curriculum maps to the Security Certified Network Professional (SCP) Network Defense and Countermeasures exam.

Prerequisite: CNG 1032.

CNG 2058 - Digital Forensics (4)
Exposes the student to the field of digital computer forensics and investigation. This class provides the student with methods to properly conduct a digital forensics investigation including a discussion of ethics. Topics covered include fundamental concepts, history of computer forensics, file structures, data recovery techniques, computer forensic tools and analyses.

Prerequisite: CNG 1032.

CNG 2059 - Enterprise Security (4)
This course challenges students to combine the skills learned in previous coursework (or work experience) and apply them in whole to a mock business IT environment. Students will work in their own virtualized server environment, complete with servers, routers, firewalls, VPN, IDS/IPS, wireless and other current technologies to develop a security policy and framework using risk analysis and risk management techniques.

Prerequisite: CNG 2056 or CNG 2057. Corequisite: CNG 2056.

CNG 2080 - Internship (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

COM - Communication

COM 1150 - Public Speaking (3)
Combines the basic theories of communication with public speech performance skills. Emphasis is on speech preparation, organization, support, audience analysis, and delivery.

COM 1250 - Interpersonal Communication: GT-SS3 (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. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

COM 1300 - Communication & Popular Culture: GT-AH1 (3)
Introduces four key theoretical models for examining popular culture: Narrative Theory, Rhetorical Theory, Gender Theory, and Critical Race Theory. Emphasis is on popular American media texts, including books, comics/graphic novels, films, music, and television. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

COM 2160 - Advanced Public Speaking (3)
Emphasizes the continued study of rhetorical theory and analysis as it relates to public speaking.

Prerequisite: COM 1150.

COM 2180 - Oral Interpretation (3)
Exposes the student to the artistic, interpretive, and communicative potential to be found in the reading and performance of great literature and rhetoric such as is found in prose, poetry, and drama.

COM 2200 - Intrapersonal Communication (3)
Introduces the study of intrapersonal communication (communication with self) and emphasizes understanding of one's past experiences in learning how to set goals, accomplish life objectives, communicate with self, and plan for the future. This course includes individualized research, journaling, creativity explorations, lessons involving an individual's past and present hopes and dreams, goal setting for the future, positive self-exploration techniques and styles, networking, personal assessments, and creativity enhancement.

COM 2220 - Group Communication: GT-SS3 (3)
Examines group communication theories with an emphasis on leadership and group behaviors. The course provides opportunities for group participation. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

COM 2250 - Organizational Communication (3)
Focuses on the role of communication theory and skills as they apply to business and organizational settings. Topics include organizational and leadership models, effective communication skills with peers, superiors, and subordinates, environmental factors impacting communication, and interviewing skills.

COM 2270 - Gender Communication (3)
Examines contemporary theories and research in gendered communication. The course will involve reading and discussion in areas of gender differences in self-perception, social and media images of men and women, language usage and nonverbal behavior differences among genders. Relevant concepts include verbal communication, nonverbal communication, context, language, perception, and conflict.

COM 2300 - Intercultural Communication: GT-SS3 (3)
Provides a global view of communication across cultures and brings an awareness of how perception, language, race, verbal, and nonverbal communication impact our behaviors, messages, and interactions. Emphasis is on developing effective and ethical cross-cultural communication skills, while also building an appreciation for different cultures. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Offered: *(GT-SS3).

COM 2400 - Argumentation and Debate (3)
Introduces the student to the theory of argumentation, including reasoning, evidence, refutation, critical thinking, and extemporaneous speaking. The course includes practice in preparation and oral analysis of selected arguments and styles of debating.

CON - Construction Technology

CON 1010 - Introduction to Construction, Part 1 (4)
Explores the expanding array of careers within the construction industry. Students will be exposed to the construction industry through job site tours, hands-on experience, and classroom activities. Math and science application will be established through the academic integration of jobsite technical skills and classroom theory.

CON 1011 - Introduction to Construction, Part 2 (4)
Explores additional careers within the construction industry. Students will be exposed to the construction industry through jobsite tours, hands-on experience, and classroom activities. Math and science application will be established through the academic integration of jobsite technical skills and classroom theory.

Prerequisite: CON 1010.

CON 2080 - Internship (2)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

Prerequisite: CON 1010 and CON 1011.

CON 2089 - Capstone: Construction (2)
Provides a demonstrated culmination of learning within a given program of study.

Prerequisite: CON 1010 and CON 1011.

CRJ - Criminal Justice

CRJ 1010 - Intro to Criminal Justice: GT-SS3 (3)
Introduces students to the basic components of the criminal justice system in the United States. Concepts of crime, crime data, victimization, perspectives and views of crime, theory and law are discussed. Particular attention to the criminal justice process, interaction and conflict between criminal justice agencies, and current criminal justice issues are examined.

Offered: *(GT-SS3).

CRJ 1025 - Policing Systems (3)
Examines policing in the United States, including: historical foundations, emerging issues, and the relationship between law enforcement and the community. The various types of law enforcement agencies, their administrative practices, and the behavior of those involved in the delivery of police services are examined from the perspective of democratic values, racial and ethnic diversity, and societal perceptions of police effectiveness. Career requirements, including current and future trends, are also presented.

CRJ 1027 - 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. Incorporates lab and lecture.

CRJ 1035 - Judicial Function (3)
Provides an overview of the structure and function of the dual American judicial system and the behavior of actors (judges/justices, lawyers, law clerks, interest groups, etc.) within the system. Emphasis is placed on the organization and administration of state and federal courts, criminal court procedures, juries, selection of judges, decision-making behavior of juries, judges and justices, and the implementation and impact of judicial policies.

CRJ 1045 - Correctional Process (3)
Examines the history and total correctional process from law enforcement through the administration of justice, probation, prisons, correctional institutions, and parole. Also examines the principles, theories, phenomena and problems of the crime, society, and the criminal justice system from the perspective of criminology and the criminal justice system in general. Emphasizes the role of sociology and other interdisciplinary approaches to the field of corrections and society's response.

CRJ 2001 - Emergency Dispatching (5)
Focuses on the unique knowledge, skills and abilities required for working in the Emergency Telecommunications industry. The course will focus on the basics of the emergency communication center, emergency telecommunication technology, caller management, call classification, legal aspects, and stress management.

CRJ 2005 - 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.

CRJ 2009 - Criminal Investigation 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.

CRJ 2030 - Criminology (3)
Provides an introduction to the study of crime, understanding the causes of crime, and examines theoretical frameworks and theories to explain criminal behavior. Within a social context, consideration is given to how theories have emerged and understand how social context contributes to explanations of crime. Examination of the nature of crime, crime victimization, crime patterns, types of crime, crime statistics, and criminal behavior is also included.

CRJ 2031 - Intro to Forensic Science & Criminalistics (3)
Exploration of the fundamentals of forensic science that are essential for gathering evidence at the crime scene and analyzing it in the crime laboratory.

CRJ 2035 - 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.

CRJ 2036 - Criminal Justice Research Methods (3)
Provides an introduction to research methods in criminal justice. Addresses foundations of research, analysis of findings, and ethical issues in researching criminal justice issues. This course will use an interactive approach in basic research concepts and practices. Students will obtain a thorough understanding of how research is conducted and how practitioners can benefit from this knowledge. Additionally, students will develop research proposals, conduct appropriate reviews of previously published research, and write a final research study.

CRJ 2057 - Victimology (3)
Demonstrates to the student the role the crime victim plays in the criminal justice system. The traditional response that a crime victim receives from the system will be studied and the psychological, emotional and financial impact these responses have on victimization will be analyzed.

CRJ 2068 - Criminal Profiling (3)
Examines theories of crime causation with respect to crimes committed by the most violent offenders in society. Identifies research done, and the history of Criminal Personality Profiling, beginning with the earliest explanations through the beliefs of modern science, as well as psychological and sociological explanations. Identifies various known offenders, examines their backgrounds, and explains how current research into homicide, sexual offenses and serial killers can provide clues to the identity of unknown offenders.

CRJ 2080 - Internship (1)
Provides placement of the student into the criminal justice field to integrate theory with practice.

CSC - Computer Science

CSC 1019 - Introduction to Programming (3)
Focuses on a general introduction to computer programming. This course emphasizes the design and implementation of structured and logically correct programs with good documentation. It is centered on basic programming concepts, including control structures, modularization, and data processing. A structured programming language is used to implement program designs. It emphasizes the writing of multiple programs following the software development process, from start to finish, including design, implementation, and testing.

Prerequisite: College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher.

CSC 1060 - Computer Science I: (Language) (4)
Introduces students to the discipline of computer science and programming. Algorithm development, data representation, logical expressions, sub-programs and input/output operations using a high-level programming language are covered. Intensive lab work outside of class time is required.

Prerequisite: CSC 1019 or MAT 1340.

CSC 1061 - Computer Science II: (Language) (4)
Continues algorithm development and problem-solving techniques not covered in Computer Science I using a high-level programming language. Students are able to gain experience in the use of data structures and the design and implementation of larger software projects. Intensive computer laboratory experience is required for this course.

Prerequisite: CSC 1060.

CSC 2017 - Advanced Python Programming (3)
Continues program development and problem solving not covered in CSC 1019: Introduction to Programming. Students will create larger programs in the areas of advanced expression, iterator objects, parsing, and GUI applications.

Prerequisite: CSC 1019 and MAT 1340 or higher or CSC 1060.

CSC 2020 - Intro to Microsoft Visual Basic.NET (3)
Provides students with the knowledge and skills needed to develop applications in Microsoft Visual Basic .NET for the Microsoft .NET platform. Focuses on user interfaces, program structure, language syntax, and implementation details. This is the first course in the Visual Basic .NET curriculum and serves as the entry point for other .NET courses.

CSC 2025 - Computer Arch/Assembly Language (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.

Prerequisite: Prerequisite/Corequisite: CSC 1061.

CSC 2030 - C Programming: Platform (3)
Prepares students to be a better programmer using the C programming language. C is a mid-level language whose economy of expression and data manipulation features allows a programmer to deal with the computer at a low level. The goal is to learn skills that are usable in many languages and understand what is happening at the machine level. The student should already understand the control structures selection, iteration, and subroutines (functions/methods).

Prerequisite: CSC 1060 or CSC 1019. Corequisite: CSC 1060.

CSC 2033 - Object-Oriented Programming: (Lang) (3)
Provides students with the skills in Programming in an OOP language at an Advanced Level. It covers all syntactical components of an object-oriented language. Emphasizes inheritance, overloading, and polymorphism. Focuses on writing clear, properly structured, and well documented programs using object-oriented methodology. Large programs using multiple data structures will be written, preferably working in large groups.

Prerequisite: CSC 1061.

CSC 2034 - C++ Programming (Platform) (4)
Starts with basic differences between C++ and other programming languages and progresses to programming advanced C++ concepts such as operator overloading, friends, references, namespaces, pointers and dynamic arrays, templates, streams and file I/O, recursion, polymorphism, exception handling and Standard Template Library. The course covers large programs that are coded implementing object-oriented design principles such as classes and objects, polymorphism, encapsulation, composition, inheritance and templates.

Prerequisite: CSC 2033.

CSC 2036 - C# Programming (4)
Introduces the C# programming language. This course covers all syntactical components of the language including arrays, structures, methods and classes. Content will focus on writing clear, properly structured, and well-documented programs using object-oriented methodology, .NET Framework, and the Visual Studio environment.

Prerequisite: CSC 1060.

CSC 2040 - Java Programming (3)
Introduces the Java Platform, Standard Edition (Java SE), to develop Graphical User Interface (GUI) applications. Language constructs will include loops, conditionals, methods, and arrays. The code will incorporate event and exception handling, File I/O, and Object-Oriented Programming (OOP) concepts.

Prerequisite: CSC 1060 or CSC 2017.

CSC 2041 - Advanced Java Programming (3)
Covers advanced programming topics including multi-threading, network/internet programming, database programming, and JavaBeans. This course focuses on writing Java Enterprise Edition (Java EE) complex programs.

Prerequisite: CSC 2040 or CSC 1060.

CSC 2046 - Mobile App Development: (Platform) (3)
Learn how to develop mobile apps using key features and frameworks. Students will learn application design and development using a mobile development platform software development kit (SDK) and corresponding programming language. Main features include: handling UI triggered and touch events, data management, simple and complex UI views, drawing, location and application settings.

Prerequisite: CSC 1060.

CSC 2052 - Database Program/Visual Basic (3)
Provides an in-depth look at Visual Basic as a database application development language. Topics may include ADO, multi-tier components, data bound controls, remote data access, SQL, and ASP.

Prerequisite: CSC 1019.

CSC 2065 - Discrete Structures (4)
Prepares students for a fundamental understanding of computing and computer science. Includes set theory, boolean algebra, relations, functions, graph theory and techniques for formal reasoning.

Prerequisite: CSC 1061.

CUA - Culinary Arts

CUA 1001 - Food Safety and Sanitation (2)
Introduces the student to the basic rules of sanitation, food-borne illnesses, safe food temperatures, safe food handling techniques, the HACCP Program, pest control procedures, and local/state health rules and regulations for food service operations. At the completion of the course students take a nationally recognized test from the Education Foundation of the National Restaurant Association. If passed with a score of 75% or more, students receive a Certificate from the Education Foundation.

CWB - Computer Web-Based

CWB 1010 - Introduction to Web Authoring (3)
Explores the complete set of web authoring skills using HTML and/or other languages. The course covers links, backgrounds, controlling text and graphic placement, tables, image maps and forms.

CWB 1030 - Web Editing Tools: (Editor) (3)
Teaches the use of tools for Web page design and development. These tools are designed to make the creation of Web pages easy and consistent. With the use of editing tools, students will be able to build Web pages making use of forms, tables, frames, templates, Cascading Style Sheets (CSS), and layers. The student will also be able to easily publish and manage a Web site once it is created.

CWB 2005 - Client-Side Scripting: (Software) (3)
Explores the client-side programming skills necessary to create dynamic Web content using a markup embeddable and procedural scripting language executing on the client Web browser.

Prerequisite: CWB 1010 and CSC 1019.

CWB 2006 - Server-Side Scripting: (Software) (3)
Teaches the creation of dynamic web pages and applications using server-side scripting with database interactivity, server-based scripting languages, and database manipulation languages.

Prerequisite: CWB 1010 and CSC 1019.

CWB 2008 - Web Application Development: Dev Tools (3)
Uses hands-on server-side scripting language and environment to teach the basics of application design including development of dynamic database driven web pages and application of key standards such as source and revision control, coding standards, code optimization, data integrity, and general principles that apply to most development environments.

Prerequisite: CWB 1010 and CSC 1019.

CWB 2009 - Web Content Management Systems (3)
Explores the use of open source Content Management Systems to simplify the creation and maintenance of web sites.

Prerequisite: CWB 1010 and CSC 1019.

CWB 2080 - Internship (2)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/ coordinator.

DAN - Dance

DAN 1005 - Hip Hop Dance I (1)
Introduces basic concepts and skills of hip hop and how it is fused with athleticism. This course will cover the progression of the hip hop dance genre beginning with foundational hip hop vocabulary. The history and culture of this genre are examined. This is a beginning level course.

DAN 1006 - Hip Hop Dance II (1)
Includes a continuing study of hip-hop dance movement and cultural concepts and focuses on advancing technique work and proficiency. This course expands and deepens understanding of vocabulary, choreography, styles of the dance, history, and current trends.

DAN 1011 - Modern Dance I (1)
Introduces basic concepts and skills of modern dance. Focuses on technique work to improve alignment and increase strength, flexibility, endurance, coordination, rhythm and spatial awareness. Explores dance as a tool for communication and dance as an art form. This is a beginning level course. May be repeated for no more than three credits.

DAN 1012 - Modern Dance II (2)
Includes a continuing study of modern dance movement concepts. Focuses on advancing technique work and proficiency. Expands and deepens understanding of alignment, strength, flexibility, endurance, coordination, rhythm and spatial awareness. Improvisation may be included. This course is for students who have successfully completed Modern I or have previous dance training. This course may be repeated up to two times for credit.

DAN 1015 - Country Swing I (1)
Includes many styles and various combinations of steps for Western dance music. Will also teach the students how to convert combinations of other dances of traditional and fad as they become popular.

DAN 1017 - 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.

DAN 1018 - 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.

DAN 1019 - 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.

DAN 1021 - 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.

DAN 1022 - Jazz II (2)
Continues Jazz I with an increased knowledge of jazz dance. Enables the student to work at an intermediate level with a basic understanding of body alignment, balance and musicality.

DAN 1026 - East/West Coast Swing I (1)
Teaches students to recognize, identify, and perform basic East Coast and West Coast swing dance movements utilizing a variety of music styles for recreational and/or pre-professional dance.

DAN 1027 - East/West Coast Swing II (1)
Teaches students to recognize, identify, and perform intermediate East Coast and West Coast swing including Lindy Hop movements to various types of music. Students will be able to dance with or without a partner. This course is a continuation of DAN 1026 - East/West Coast Swing I, and trains students for recreational and/or pre-professional dance.

DAN 1029 - 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.

DAN 1030 - 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.

DAN 1031 - 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.

DAN 1032 - Ballet II (2)
Continues Ballet I and emphasizes ballet terminology, fundamental exercises and the basic elements of dance. Focuses on an intermediate level within the basic structure of the ballet class.

DAN 1041 - Ballroom Dance (1)
Introduces the basic terminology, techniques and routines of several dances from a specific country or region. Focuses on the music, costumes and customs related to the dances they study. Partners are not required. May be repeated for a maximum of three credits.

DAN 1042 - Ballroom Dance II (1)
Continues Dance 1041 with focus on regional dances, customs and rhythms. Partners are not required. May be repeated for a maximum of three credits.

DAN 1043 - Tap I (1)
Introduces basic tap dance movements and techniques. The shuffle, ball change, brush, flap heel drop, stomp, and stamp step are covered.

DAN 1050 - Dance History: GT-AH1 (3)
Examines Western & non-Western dance as an expression of cultural value throughout history from early Renaissance dance through present day dance trends. Attention is given to social, political, economic, environmental, racial and gender effects as it pertains to the historical development of dance forms within societies. Explores how our cultural lens shifts our perception of movement, the body, and our values. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

DEA - Dental Assisting

DEA 1011 - 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.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher.

DEA 1012 - Dental Science I (3)
Includes fundamentals of the oral structures as they apply oral histology, embryology, morphology, pathology and dental anatomy.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher.

DEA 1013 - 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.

Prerequisite: DEA 1011 and DEA 1012.

DEA 1015 - 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.

Prerequisite: DEA 1011 and DEA 1012.

DEA 1016 - Medical Emerg in 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.

Prerequisite: DEA 1011 and DEA 1012.

DEA 1021 - 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.

Prerequisite: DEA 1011 and DEA 1012.

DEA 1022 - Specialties in Dentistry (2)
Focuses on armamentarium of specific tray set-ups for periodontics, endodontics, and fixed and removable prosthodontics. Examines pediatric dentistry, oral surgery, and implants. Includes diagnosis, treatment, and the dental assistant's role in each specialty.

Prerequisite: DEA 1011 and DEA 1012.

DEA 1023 - Dental Materials I (3)
Includes fundamentals of dental materials as they apply to clinical and laboratory applications of cements, bases, liners, dental metals, resins, glass ionomers, ceramics and dental abrasives.

Prerequisite: DEA 1011 and DEA 1012.

DEA 1024 - Dental Radiography (3)
Focuses on the science of radiography, the application of radiographic techniques, and aseptic techniques.

Prerequisite: DEA 1011 and DEA 1012.

DEA 1031 - Prevent/Nutrition Dentistry (3)
Emphasizes techniques in preventive dentistry to include application of fluoride, pit and fissure sealants, oral home care instruction, diet counseling and nutrition as it applies to dental health. Covers techniques for coronal polishing, extra-oral and intra-oral examination, and dental charting.

Prerequisite: DEA 1015, DEA 1016, DEA 1021, DEA 1023.

DEA 1033 - Dental Materials II (3)
Includes fundamentals of dental materials as they apply to clinical and laboratory applications of hydrocolloid and elastomeric impressions materials, gypsum products, dental waxes, study and final working models, and fabrication of provisional crowns, custom impression trays and bleaching trays.

DEA 1034 - Advanced Dental Radiography (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.

Prerequisite: DEA 1015, DEA 1016, DEA 1021, DEA 1023 and DEA 1024.

DEA 1035 - 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.

Prerequisite: DEA 1015, DEA 1016, DEA 1021, DEA 1023, DEA 1024.

DEA 1081 - Internship I: Dental (1)
Provides an opportunity to perform clinical dental assisting skills in a dental office or clinical setting and work toward completing clinical hours required by the Commission on Dental Accreditation (CODA).

Prerequisite: DEA 1011, DEA 1012, DEA 1015, DEA 1016, DEA 1021, DEA 1023, DEA 1024.

DEA 1082 - Internship II: Dental (2)
Provides an opportunity to perform and advance clinical dental assisting skills in a general dental office, specialty office or clinical setting and work toward completing clinical hours required by the Commission on Dental Accreditation (CODA).

Prerequisite: DEA 1081.

DEA 1083 - Internship III: Dental (6)
Explores specific responsibilities pertinent to the oral health team. Provides students with an opportunity to use and enhance dental assisting skills in general dentistry and the dental specialties and work toward completing clinical hours required by the Commission on Dental Accreditation (CODA).

Prerequisite: DEA 1081.

DEA 2011 - Intro to Expanded Functions (4)
Emphasizes techniques and concepts of expanded functions in dental assisting, including team management, placement and finishing of dental restorative materials, and adjunct procedures necessary to restorative dentistry.

Prerequisite: DEA 1011, DEA 1012, DEA 1013, DEA 1015, DEA 1016, DEA 1021, DEA 1022, DEA 1023, DEA 1024, DEA 1031, DEA 1033, DEA 1034, DEA 1035, DEA 1040, DEA 1081, DEA 1082.

DEH - Dental Hygiene

DEH 1001 - Preclinical Dental Hygiene (2)
Introduces basic dental hygiene theory, instrumentation, and patient care assessment. Focuses on the application of diagnostic, preventive, and therapeutic procedures in a wide variety of areas related to clinical practice, health promotion, and disease prevention.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1002 - Preclinical Dental Hygiene Lab (3)
Introduces the entry-level dental hygiene student to fundamental procedures and techniques to include instrumentation, infection control, and patient assessment. Provides a variety of clinical learning experiences to develop basic skills and knowledge for entry into the dental hygiene profession.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1003 - Dental Anatomy and Histology (3)
Introduces the general anatomy of the face including terminology, anatomic landmarks, and tooth identification. Specific focus is placed on the anatomical and histologic features

of the teeth and other structures of the oral cavity. Introduction to the embryology of the face, oral, and nasal cavities is presented, as well as development of the teeth and histological features of the various components of the teeth and surrounding structures.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1004 - Dental Radiology (3)
Introduces principles of x-radiation production and safety factors; application and theory of properly exposing, processing, mounting and evaluating radiographs; identification of normal anatomic landmarks and pathologic conditions. Focuses on utilization of the laboratory in performing procedures necessary to produce quality radiographs.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1005 - Intro to Dental Hygiene (1)
Provides the first year dental hygiene student with the basic knowledge, theory, and skill necessary to advance to subsequent clinical dental hygiene courses. This course includes an introduction to the principles of basic instrument recognition, expected professional and ethical behaviors, HIPAA and FERPA compliance, OSHA standards for infection control, dental software systems, oral hygiene instruction, dental hygiene care planning for the patient, and proper consent form documentation.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1011 - Dental and Medical Emergencies (2)
Explains the management of emergency situations with an emphasis on prevention and identification of potential medical emergencies that can occur in the dental office or during dental treatment. Provides practical skills applicable to dental hygienists and the scope of responsibility for medical emergency management as dictated by state dental practice law. Includes content and use of emergency kits, oxygen support systems, use of ASA classification to evaluate risk, and emergency management simulations.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1022 - Periodontics I (2)
Introduces the principles of periodontics with a focus on the recognition of tissues in health and disease, macro and microanatomy of the periodontium, and histopathology of periodontal diseases and other related gingival conditions. This course explains the theory and discussion of periodontal assessment, etiology, epidemiology, inflammatory process/immune response, and the American Academy of Pediatrics (AAP) Periodontal Disease Classification System.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1023 - Head and Neck Anatomy (1)
Analyzes the anatomy and function of the head and neck with emphasis on the muscles of mastication and facial expression, bones of the head and neck, the temporomandibular joint, lymphatics, glandular system, vascular supply, nervous system, and the oral cavity.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1026 - Dental Materials (2)
Examines the science of dental materials providing a sound knowledge of the use and function of these materials in clinical practice. Covers didactic and laboratory experiences of the physical properties, chemistry, and clinical applications of the materials used in the practice of dentistry.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1032 - Applied Dental Pharmacology (2)
Examines general pharmacology and discusses relevant drugs that may influence the management of dental hygiene patients. Completion of the course enables students to perform safe and effective evaluations of patients for dental hygiene treatment.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1033 - Local Anesthesia (2)
Provides a working knowledge of the theory and practice of local anesthesia as applied to the practice of dentistry/dental hygiene. Emphasizes mastery of the armamentarium and techniques of regional anesthesia. Covers the knowledge and skills necessary to administer local anesthetics proficiently and safely.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1038 - Nitrous Oxide/Oxygen Sedation (1)
Develops a working knowledge of the equipment and methods used to administer nitrous oxide/oxygen sedation in the dental office.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1050 - Dental Lasers: Theory & Practice (1)
Develops knowledge related to the use of diode lasers in dental hygiene treatment. Introduction to the physics of laser technology with safe integration into the dental hygiene clinical setting.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1053 - Clinical Theory I (2)
Builds on introductory concepts with emphasis on enhancing skill and knowledge in patient assessment, instrumentation and instrument maintenance, preventive and adjunctive dental hygiene procedures.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1070 - Clinical Practice I (4)
Creates direct clinical experience for the student dental hygienist by providing an opportunity to treat a variety of patients utilizing assessment, instrumentation, and additional preventative clinical procedures.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 1071 - Clinical Practice I-A (2)
Provides patient care opportunities for the performance of dental hygiene treatment. Treatment will be provided to both periodontally-compromised and healthy patients utilizing advanced instrumentation and power scaling.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2002 - Dental Nutrition (2)
Builds a foundational knowledge of general nutrition in relation to nutrient functions, sources and their impact on the body with a focus on the oral cavity. This course covers integration of physiological and behavioral concepts through the implementation of dietary assessment and nutritional intervention during the process of dental hygiene care.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2004 - Community Dental I (2)
Develops knowledge in the concepts, methods, and social determinants of health related to improving oral health in the community. Emphasis is placed on evidence-based strategies for the development of oral health promotion, oral disease prevention and oral health management programs.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2013 - General and Oral Pathology (3)
Focuses on the fundamentals of general pathology and the disease process. Covers oral pathology with emphasis on recognition and identification of pathologic conditions that most frequently occur around the oral cavity. Helps students identify appropriate referral mechanisms to render a definitive diagnosis.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2021 - Ethics and Practice Management (2)
Focuses on the transition from an educational environment to a working dental business. Enables the student to learn management skills of operating a dental office. Emphasizes opportunities for self-exploration in development of personal and professional goals. Examines professional ethics, legal issues, and the relationship to the licensed practice of dental hygiene.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2025 - Community Dental Health II (1)
Provides practical application of community dental health theory and opportunities to conduct needs assessments on a variety of populations. Emphasizes meeting the educational needs of specific populations through program planning, implementation and evaluation. Incorporates supervised field experiences in low-income, school and other public facilities as well as private health and education oriented organizations.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2042 - Periodontics II (2)
Continues to explore theoretical/clinical preparations with emphasis on dental hygiene process of care, treatment planning, non-surgical treatment, evaluation of treatment, and maintenance needs of the periodontal patient. Develops research and decision making skills with use of library and Internet resources relating to risk factors, etiologic agents, and treatment modalities. Includes comprehensive periodontal assessment, supplemental diagnostics, periodontal pharmacology, and evidence based treatment planning.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2068 - Clinical Theory II (2)
Provides the didactic theory for clinical practice of dental hygiene skills at the beginning of the second year of dental hygiene curriculum. Builds on clinic theory from first year curriculum to provide the knowledge base needed for treatment of patients with more advanced periodontal disease and medical/health factors. Focuses on: periodontal charting and documentation, interpretation of periodontal factors on radiographs, use of treatment planning in the dental hygiene process of care, legal parameters of record keeping and informed consent, use of oral photography, application of sealants, treatment of dental hypersensitivity, application of chemotherapeutics and professional oral irrigation, application of ergonomics in dentistry, clinical dental hygiene treatment considerations for patients with history of cardiac complications and diabetes.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2070 - Clinical Practice II (6)
Covers patient care sessions for the performance of traditional dental hygiene treatment. Continues and expands periodontal patient care and special patient care sessions. Focuses on clinical competence in margination and polishing of restorations, nutrition counseling, oral irrigation, chemotherapeutics and OSHA compliance.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2071 - Clinical Practice III (7)
Continues patient care session with emphasis on attaining a level of competency and efficiency for successful performance in clinical board exams and private practice. Focuses on clinical skill development in tobacco cessation, product selection, patient communications, curettage and special topics developed patient treatments. Provides elective extra-mural clinical sites for additional practice.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2082 - Periodontics III (1)
Course provides comprehensive dental hygiene clinical management techniques for periodontal patients supported by application of basic clinical research sciences. Focus is on the therapy component of periodontics including instructional sessions covering the general principles of periodontal surgery, the surgical management of soft tissues and osseous defects, wound healing, implants, and the role of occlusion in periodontal therapy.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2085 - Clinical Theory III (2)
Serves as the capstone course of the final semester of a two-year curriculum. Prepares the student for two major goals: basic competence for transition to provision of dental hygiene services in private practice; and the ability to successfully pass both written National Boards examinations and regional dental hygiene clinical examinations. Emphasizes the application of case based learning. Major topics include: cosmetic bleaching, air powered polishing devices, application of the re-evaluation process in treatment planning for periodontally involved cases, preparation for the CRDTS regional clinical exam process, application of an effective tobacco cessation process, technique and process for gingival curettage, technique and process for amalgam polishing and margination, care of cosmetic dental restorations, and maintenance of implants.

Prerequisite: Acceptance into the Dental Hygiene Program.

DEH 2089 - Capstone (1)
Provides a demonstrated culmination of learning within a given program of study.

Prerequisite: Acceptance into the Dental Hygiene Program.

DRV - Driving

DRV 1038 - Driver Training (6)
Provides over-the-road driving experience with the driving instructor to prepare participants for the CDL driving test. This class drills students in safe driving procedures both on and off the road, including driving empty and loaded vehicles, proper turning and backing, appropriate use of brakes, shifting, and observing speed limits, signals, road signs, and port-of-entry procedures.

ECE - Early Childhood Education

Students enrolling in ECE 102, ECE 112, ECE 124 , ECE 180, ECE 188, ECE 280 and ECE 288 must pass a criminal background check before they are allowed to start their practicum hours with children. Contact your home campus ECE Program Director if you are enrolling in an on-campus section of a practicum course or the FRCC-ECE Online Lead if you are enrolling in an online section of a practicum course for information on how to complete the background check process.

ECE 1011 - Introduction to Early Childhood Education (3)
Provides an introduction to the profession of Early Childhood Education (ECE). Course content includes eight key areas of professional knowledge related to working with young children and their families in early care and education settings: child growth and development; health, nutrition and safety; developmentally appropriate practices; guidance; family and community relationships; diversity and inclusion; professionalism; and administration and supervision. This course addresses children ages birth through 8 years.

ECE 1011 en español - Introducción a la Educación Infantil Temprana (3)
Proporciona una introducción a la profesión de Educación de la Primera Infancia (ECE). El contenido del curso incluye ocho áreas clave de conocimiento profesional relacionadas con el trabajo con niños pequeños y sus familias en entornos de cuidado y educación de la primera infancia: crecimiento y desarrollo infantil; salud, nutrición y seguridad; prácticas apropiadas para el desarrollo; guía; relaciones familiares y comunitarias; diversidad e inclusión; profesionalismo; y administración y supervisión. Este curso está dirigido a niños desde el nacimiento hasta los 8 años.

ECE 1031 - Guidance Strategies for Young Children (3)
Explores guidance theories, applications, goals, and techniques, as well as factors that influence behavioral expectations of children. This course includes classroom management and pro-social skills development of young children in early childhood (EC) program settings. This course addresses children ages birth through 8 years.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 1031 en español - Estrategias de orientación para niños pequeños (3)
Proporciona una exploración de las teorías, técnicas y prácticas de orientación utilizadas para abordar patrones repetidos de comportamiento infantil que interfieren con la capacidad de un niño pequeño para aprender y participar en interacciones prosociales con compañeros y adultos. Este curso cubre los factores que influyen en el comportamiento de los niños, así como aspectos del profesionalismo de los educadores de la primera infancia relacionados con la práctica de orientación ética y equitativa. Este curso está dirigido a niños desde el nacimiento hasta los 8 años.

Prerequisite: Prerequisite/Corequisite: ECE 1011 or ECE 1011 en español.

ECE 1045 - Intro to ECE Techniques (3)
Focuses on a classroom seminar and placement in a child care setting. The supervised placement provides the student with the opportunity to observe children, to practice appropriate interactions, and to develop effective guidance and management techniques. Addresses ages birth through age 8.

Prerequisite: Prerequisite/Corequisite: ECE 1011 and ECE 1031.

ECE 1088 - Practicum: ECE (4)
Provides students with field experience in early childhood programs.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 1111 - 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. Focuses on birth through age three.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 1125 - Introduction to Infant/Toddler Lab Techniques (3)
Includes a classroom seminar and placement in an infant and/or toddler setting. The supervised placement provides the student with the opportunity to observe, to practice appropriate interactions and to develop effective guidance and nurturing techniques with infants and/or toddlers. Addresses ages prenatal through age 2.

Prerequisite: Prerequisite/Corequisite: ECE 1011 and ECE 1111.

ECE 1261 - 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.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 1271 - 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.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 1511 - Early Childhood Education Leadership Development (1)
Introduces concepts of leadership as an early childhood professional and provides opportunities to develop leadership skills. This course includes qualities, characteristics, and responsibilities of successful leaders, ethics, advocacy, collaboration and professional growth.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 1551 - 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.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 1571 - 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.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 1611 - 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.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 1951 - 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.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2051 - ECE Nutrition, Health and Safety (3)
Focuses on nutrition, health, and safety as key factors for optimal growth and development of young children. This course includes nutrition knowledge, menu planning, food program participation, health practices, management and safety, appropriate activities, and communication with families for early childhood educators. This course addresses children ages birth through 12 years.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2061 - Observation/Assessment of Young Children (1)
Provides a foundational understanding of the observation and assessment of young children’s development and learning environments. This course also examines the current research on the continuous practice of observing and assessing children’s development and incorporates practice with a variety of assessment instruments, particularly evidence-based and authentic assessment.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2088 - Practicum: Early Childhood Education (4)
Provides students with advanced field experience opportunities in early childhood education programs.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2089 - Capstone (1)
Incorporates a demonstrated culmination of learning within a given program of study.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2101 - Working w/Families & Communities (3)
Examines professional attitudes related to working with diverse families and how unconscious bias may affect family-professional partnerships in early care and education settings. This course covers theoretical perspectives of families and communities, communication strategies, and an exploration of activities and resources to support family engagement in their children’s education. Supporting equity and inclusion of all family cultures in early care and education settings for children ages birth through eight.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2365 - Child Growth/Development Laboratory (1)
Covers the growth and development of the child from conception through the elementary school years. Emphasizes physical, cognitive, language, social and emotional domains and the concept of the whole child and how adults can provide a supportive environment. Addresses ages from prenatal through age 12.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2381 - ECE Child Growth and Development (3)
Covers the growth and development of the child from conception through the elementary school years. This course emphasizes physical, cognitive, language, social and emotional domains of development as they pertain to the concept of the whole child. It also includes ways adults can provide a supportive early childhood care and educational environment through teamwork and collaboration.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2401 - Admin of ECE Programs (3)
Provides foundational knowledge in early childhood program business operations, program development, and evaluation. This course covers administrative skills, ethical decision making, risk and resource management, and components of quality Early Childhood Education (ECE) programs serving children ages birth through 12 years.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2411 - Admin: Human Relations ECE (3)
Focuses on the human relations component of an early childhood professional's responsibilities. This course includes director-staff relationships, staff development, leadership strategies, family-professional partnerships, and community interaction.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2601 - The Exceptional Child (3)
Presents an overview of critical elements related to educating young children with disabilities or special needs in the early childhood setting. Topics include: typical and atypical development: legal requirements; research-based practices related to inclusion; teaming and collaboration; and accommodations and adaptations. This course examines how a disability or special need may impact a young child's learning process. This course addresses children ages birth through 8 years.

Prerequisite: Prerequisite/Corequisite: ECE 1011 and ECE 2381.

ECE 2621 - Curriculum Methods/Techniques (3)
Provides an overview of early childhood curriculum development. This course includes processes for planning and implementing developmentally appropriate environments, materials, and experiences that represent best practices in early childhood (EC) program settings. This course addresses children ages birth through 8 years.

Prerequisite: Prerequisite/Corequisite: ECE 1011 and ECE 2381.

ECE 2641 - 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.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2651 - Early Language and Literacy (3)
Provides foundational knowledge of the developmental progression of language and literacy acquisition of mono- and bi-lingual children age's birth to age 8. This course provides opportunities to explore and practice language and literacy teaching strategies to use with young children in home, classroom, and community settings.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECE 2661 - Science, Math and the Young Child (3)
Examines theories of cognitive development as a framework for conceptualizing the way young children acquire scientific and mathematical skills, concepts, and abilities. Enables students to research and develop appropriate individual and group scientific and mathematical activities for young children.

Prerequisite: Prerequisite/Corequisite: ECE 1011.

ECO - Economics

ECO 1001 - Economics of Social Issues: GT-SS1 (3)
Examines major contemporary socio-economic issues and policies such as drugs and crime, education, health care, poverty and inequality, and globalization. These issues will be explored using economic tools and methods. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

ECO 1005 - Introduction to Economics (3)
This course is a survey of economics. It is designed as a beginning economics class. The course covers economics theories, supply and demand, national income accounting, money and banking, market structures and contemporary economic issues.

ECO 2001 - Principles of Macroeconomics: GT-SS1 (3)
Focuses on the study of the national economy, emphasizing business cycles and long-run growth trends. Explores how macroeconomic performance is measured, including Gross Domestic Product and labor market indicators. Examines the saving-investment relationship and its relationship to Aggregate Supply and Aggregate Demand. Discusses money and banking, international trade, fiscal and monetary policy. Explores the macroeconomic role of the public sector. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

ECO 2002 - Principles of Microeconomics: GT-SS1 (3)
Focuses on the study of individual decision making, emphasizing households, business firms and industry analysis. Explores market models, including competition, monopoly, monopolistic competition and oligopoly. Examines market failure and related efficiency criteria for government intervention. Explores public policy, including labor market issues, poverty and the environment. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

ECO 2011 - Gender in the Economy: GT-SS1 (3)
Introduces the role of gender in the economy including the concepts of femininity and masculinity and how these concepts play a role in consumption, labor, marriage, poverty, inequality, and globalization. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

ECO 2045 - Environmental Economics: GT-SS1 (3)
Introduces contemporary environmental issues and policies meant to reduce environmental degradation. It introduces the concept of market failure due to pollution. The course covers government pollution reduction policies for air, water, and natural environments. It also covers analytical tools that are used to analyze the effectiveness of these policies. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

EDU - Education

Students enrolling in EDU 288 must pass a criminal background check before they are allowed to start their site hours. Contact your home campus EDU Lead Faculty or the FRCC – EDU Online Lead for information on how to complete the background check process.

EDU 1011 - Communication Skills Special Populations (3)
Allows students to develop knowledge in areas of effective communication skills; problem solving techniques; and analyzing self as communicator.

EDU 1088 - Practicum I (1)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the education facility and with the direct guidance of the instructor.

EDU 1094 - Service Learning (3)
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.

EDU 1311 - Introduction to Adult Education (3)
Provides an introduction to adult education with an emphasis on providing instruction to adult learners developing their ability to listen, speak, read, and write in English and learners with skills below 12th grade equivalency. Key areas include adult education theories, principles, methods and techniques; adult education legislation, initiatives and movements; adult basic education services and service providers; understanding the adult learner; metacognition; the instructional environment; and professional development for adult educators.

EDU 1321 - Planning & Delivering Instr to Adults (3)
Provides an introduction to planning and delivering instruction to adult learners with an emphasis on developing the English language proficiency of non-native English speakers and improving the skills of learners whose skills are below 12th grade equivalency. Key areas include identification of learners' skills,

needs and goals; the use of information about learners to plan instruction and assessment; the development of learner independence; the creation of an instructional environment that supports and engages adult learners.

EDU 1331 - Adult Basic Education (ABE) & Adult Secondary Education (ASE) (3)
Provides an introduction to providing literacy and numeracy skills instruction to adult learners functioning below 12th grade equivalency. Key areas include understanding the Adult Basic Education and Adult Secondary Education leaner and the literacy and numeracy skills needed to complete each Educational Functioning Level; preparing written instructional plans; delivering level appropriate instruction using techniques and resources appropriate for ABE and ASE learners; using technology; and preparing learners to transition to postsecondary education and careers.

EDU 1341 - Teaching ESL to Adults (3)
Provides an introduction to providing instruction to adults who are developing English language proficiency. Key areas include understanding the adult ESL learner, the language acquisition process and the language skills needed to complete each Educational Functioning Level (EFL); preparing written instructional plans; delivering level appropriate instruction using techniques and resources appropriate for adult language learners; using technology; and preparing adult ESL learners to transition to postsecondary education and careers.

EDU 1351 - 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.

EDU 2088 - Practicum II (1)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the education facility and with the direct guidance of the instructor.

Corequisite: EDU 2211.

EDU 2201 - 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.

EDU 2211 - Introduction to Education (3)
Focuses on the historical, social, political, philosophical, cultural, and economic forces that shape the United States public school system. This course includes current issues of education reform, technology as it relates to education, and considerations related to becoming a teacher in the state of Colorado. The course addresses diversity in the preschool through secondary school system.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher.
Corequisite: EDU 2088.

EDU 2221 - Effective Teaching (1)
Focuses on strategies for becoming an effective teacher. Topics include course goals and objectives, the first day, planning a lesson, higher levels of thought, test design and grading, assessment, and teaching and learning styles.

EDU 2331 - English Language Learners (3)
Focuses on all aspects in the role of working with and teaching English Language Learners (ELL). This course introduces language acquisition, pedagogy, and culture. Additional topics include the examination of historical, legal, and political issues related to educational programs for non-and limited-English speaking students, and associated resources for teaching ELL students.

EDU 2341 - Multicultural Education (3)
Explores racial, ethnic, cultural, and socioeconomic groups to gain an understanding of equity, diversity, and inclusion in communities and education. This course provides opportunities to contextualize multicultural perspectives in society and their impact on the education system.

EDU 2401 - Teaching Exceptional Learners (3)
Focuses on learners with exceptionalities with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations in special education preschool to 21 (P-21). Course topics include issues related to mild disabilities, severe disabilities, emotional and behavioral disorders, intellectual disabilities, and gifted and talented.

Prerequisite: PSY 2441.

EDU 2501 - CTE in Colorado (1)
Explores common elements of Career and Technical Education philosophy and current practices. It details the philosophy of Career and Technical Education (CTE), the federal Carl D. Perkins legislation and related guidelines for CTE, the Colorado Technical Act, national and state regulatory agencies, the CCCS program approval process, enrollment management and advising strategies, relevant local and national issues, and quality assurance principles.

EDU 2511 - Secondary CTE Capstone (3)
This capstone course in the secondary CTE credentialing sequence offers an in-depth analysis of secondary career and technical student organizations and competitions, the Colorado Technical Act, working with exceptional students, creating and effectively deploying program advisory committees, and an overview of educational and political systems in Colorado. The final project is an analysis of the efficiency with which one's employing school district funds, operates and assesses CTE programs.

EDU 2601 - Adult Learning and Teaching (3)
Examines the philosophy of community colleges and/or secondary schools and the roles and responsibilities of the faculty member within the college/school community. Introduces basic instructional theories and applications, with particular emphasis on adult learners. Includes syllabus development, learning goals and outcomes, and lesson plans. Emphasizes teaching to a diverse student body, classroom management, assessment and instructional technology.

EDU 2611 - Teaching, Learning and Technology (3)
Explores integration of technology instruction into teaching practices used in preschool through postsecondary (P-21) educational settings for all curriculum areas of content. This

course reviews a variety of technologies with an emphasis on increasing student learning and retention of knowledge. The course also explores combining technology with several instructional methodologies to promote professional teacher dispositions related to technology-rich teaching.

EDU 2661 - Advanced College Teaching Methods (1)
Explores current adult learning theory, and relates this theory to the practice of teaching. It also covers a variety of factors that influence teaching and learning, including social and individual psychological aspects of adult learning, patterns of participation and motivation, the role of instructional technology, handling challenging classroom behaviors, and assessment and evaluation strategies. The main point raised and discussed throughout the course is that effective teaching requires that instructors utilize a range of teaching and assessment approaches and methods in order to enhance learning.

EGG - Engineering

EGG 1000 - Introduction to Engineering (1)
Introduces the math and science required in a variety of engineering disciplines. The particular engineering disciplines examined are: Civil Engineering, Mechanical Engineering, Electrical Engineering, Industrial Engineering, and Computer Science. For each discipline the course will examine certification requirements, program of study, types of work and tasks in each discipline and compensation ranges. Tours and speakers will be arranged.

EGG 1040 - Engineering Projects (3)
Teaches how to engage community stakeholders and use traditional research practices to identify, define, articulate, and design technical solutions to open-ended problems. The course utilizes teamwork on a semester-long iterative design project.

Prerequisite: MAT 1340 or higher .

EGG 1050 - Engineering Data Analysis (1)
Focuses on the process of data analysis and presentation for scientists and engineers. Topics include an introduction to statistics, probability, data graphics, fitting, modeling, and communicating the data and results in written and oral formats.

Prerequisite: MAT 1340 or higher.

EGG 1051 - Experimental Design (2)
Introduces the design and construction of scientific and/or engineering experiments. This course covers the entire life cycle of the experiment or prototype from concept generation and design through construction, making measurements, analysis of collected data, and communication of results.

Prerequisite: MAT 1340 or higher.

EGG 1060 - Intro to Engineering Computing (4)
Introduces techniques for designing, implementing, and testing computer programs in higher-level programming languages to solve problems common in engineering domains. This course uses elementary numerical methods, visualization, and tools from engineering.

Corequisite: MAT 2410 or higher.

EGG 1065 - Logic Design I (4)
Covers the design of combinatorial and sequential switching circuits. Topics include: Boolean Algebra, Boolean Function Minimization Techniques, Combinatorial Circuit Analysis and Synthesis, Synchronous Sequential Circuit Analysis and Synthesis, Alogorithmic State Machine Design, Asynchronous Sequential Circuit Analysis and Synthesis. Use of computer aided design tools facilitating design, simulation and implementation of digital system using field programmable logic devices is an integral part of the entire course. Laboratory experiments included.

EGG 2011 - Engineering Mechanics I - Statics (3)
Focuses on the vector and calculus treatment of forces and force systems, including particle and rigid body force systems. Additional topics include moments, friction, structures, and section properties.

Prerequisite: MAT 2410 or higher. Corequisite: PHY 2111.

EGG 2012 - Engineering Mechanics II - Dynamics (3)
Presents content in particle kinematics, including 2-D motion in x-y coordinates, normal tangential coordinates, and polar coordinates; rigid body kinematics, including relative velocities and relative accelerations; and rigid body kinetics, including the equation of motion, work and energy, linear impulse-momentum, and angular momentum.

Prerequisite: EGG 2011.

EGG 2020 - Thermodynamics (3)
Explores fundamental concepts and basic theory, including first and second laws of thermodynamics, thermodynamic functions, properties, states, cycles, pure substances, and chemical and phase equilibrium.

Prerequisite: PHY 2111 and MAT 2410 or higher.

EGG 2030 - Mechanics of Solids (3)
Uses forces and torque to determine stress and strain on objects. This course includes bending moments, shear forces, deflection in beams, deformations in structural members, and stress transformation.

Prerequisite: EGG 2011.

EGG 2041 - Circuit Analysis I (4)
Introduces the basic techniques used in the design and analysis of electrical circuits. This course includes basic theorems of DC circuit analysis, transient analysis, and steady state analysis of AC circuits. The course also includes a lab component using standard electrical lab equipment.

Prerequisite: MAT 2420 or higher. Corequisite: PHY 2112.

EGT - Engineering Graphics Technology

EGT 1101 - Mechanical Design I (3)
Provides the training to develop skillsets on how to produce technical drawings utilizing the latest technologies. Course will develop skills in hand lettering/sketching techniques and the use of a Computer Aided Design (CAD) based drawing system. Course covers how to develop technical drawings demonstrating multi-view orthographic projections, auxiliary views, section views, and beginning dimensioning concepts based on ANSI/ASME standards.

EGT 2200 - Civil/Survey Drafting I (3)
Focuses on Civil and Survey drafting skills necessary to produce document sets of land surveys/plats, legal descriptions, site layout, plan, profile & alignments, and contour maps.

EGT 2202 - Civil/Survey Drafting II (3)
Focuses on advanced Civil and Survey drafting skills. The course focuses on the creation of computer aided drawings focused on piping, earthwork, road and highway construction as well as developing a set of construction documents including advanced skills in civil and survey drawings.

Prerequisite: EGT 2200.

EGT 2300 - Engineering Materials (3)
Investigates the physical and mechanical properties of engineering materials used within industry. Includes the study of ferrous and nonferrous metals, polymers (plastics), ceramics, composites, and other advanced materials.

EGT 2305 - Geometric Dimension & Tolerance (3)
Focuses on interpreting and applying geometric dimensioning and tolerancing (GDT) in machining or drafting per the ASME Y14.5 specification. Demonstrate and distinguish GDT through math formulas, tolerancing systems, modifiers, symbols, datums, and tolerances of form, profile, orientation, run-out and location. Students examine and interpret the generation of a working drawing, and how they are developed as a team effort between design, drafting, manufacturing and quality control.

Prerequisite: CAD 1100. Machining students need only take MAC 1002.

EIC - Electricity Ind-Commercial

EIC 1265 - Solid State Devices & Circuits (4)
Explores the basic properties of diodes, transistors, triacs, SCRs and other solid-state devices. Covers applications of solid-state devices in control and power conversion and the circuits in equipment likely to be encountered in power installations.

Prerequisite: ELT 1206.

EIC 1271 - Maintenance Management (1)
Covers the critically important but often overlooked component of maintenance management. Focuses on the implementation of a maintenance program or improvement of an existing program. Covers how to reduce unscheduled overtime, excessive material costs, and the number of breakdown repairs.

Prerequisite: ELT 1206.

EIC 2330 - Instrument & Process Control II (4)
Introduces the basic concepts, principles, equipment and components of instrumentation and control systems found in the process and energy supply industries. The fundamental process variables of pressure, temperature, level, flow and physical properties will be presented. Control loop structure and function will be introduced. The function and operation of a proportional-integral-derivative (PID) controller will be introduced. Students will assemble and operate basic control loops in a laboratory setting.

Prerequisite: ELT 1206.

ELT - Electronics

ELT 1004 - Electronic Assembly (3)
Introduces electronic assembly methods with an emphasis on processes, safety, component recognition, and soldering techniques for both through hole and surface mount components.

ELT 1206 - Fundamentals of DC/AC (4)
Introduces the basic skills needed for many careers in electronics and related fields. Covers the operations and applications of basic DC and AC circuits consisting of resistors, capacitors, inductors, transformers and diodes. Emphasizes the use of common test instruments in troubleshooting.

Prerequisite: MAT 1140 or higher.

ELT 1212 - Advanced DC-AC (3)
Continues to build on ELT 1206 (p. 205) and covers advanced concepts of DC-AC circuits. Includes an expanded treatment of power supplies, dual-supply rectifier circuits, and Zener diode voltage regulators. Emphasizes troubleshooting.

Prerequisite: ELT 1206.

ELT 1247 - Digital Devices I (4)
Introduces the operation and application of gates, flip-flops, counters, shift registers, encoders-decoders and LED displays. Covers binary numbers, Boolean algebra and troubleshooting.

Prerequisite: ELT 1206.

ELT 2080 - Internship (1)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

Prerequisite: Permission of Chair or Instructor.

ELT 2215 - Operational Amplifiers (3)
Focuses on a study of integrated operational amplifiers and their applications. Troubleshooting is emphasized.

Prerequisite: ELT 1206.

ELT 2252 - 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.

Prerequisite: ELT 1206.

ELT 2254 - 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.

Prerequisite: ELT 1206.

ELT 2358 - Programmable Logic Controllers (3)
Covers the fundamentals of programmable logic controllers (PLCs) as they are applied in robotics and automation. Includes history, terminology, typical applications, hardware and software. Incorporates lab and project activities that address operating, monitoring, programming, troubleshooting and repairing PLC controlled lab trainers as well as actual industrial equipment.

Prerequisite: ELT 1206 and ELT 2252.

ELT 2361 - Microprocessors (3)
Focuses on basic operation and applications of microprocessors. Enables the student to write machine and assembly language programs, interface microprocessors to various devices, and troubleshoot microprocessor-based systems.

Prerequisite: ELT 1247.

ELT 2362 - Intro to Microcontrollers (3)
Introduces the architecture, hardware, programming languages, and input/output capabilities of microcontrollers. The course develops the skills necessary to write and debug code, program the microcontroller, acquire and analyze sensor data, and use that data to control actuators.

Prerequisite: ELT 1247.

ELT 2367 - Introduction to Robotics (1)
Introduces basic robotics. Enables the student to program a robot in a higher-level language to perform various tasks. Covers building and interfacing of sensor circuits.

Prerequisite: ELT 1206.

ELT 2368 - Robotics Technologies (3)
Introduces industrial robotics as well as a survey of the technologies and equipment used in manufacturing automation and process control. Includes axis configurations, work envelopes, programming, troubleshooting, and maintenance. Incorporates a survey of automation topics including history, computer and hardwired controls, sensors and transducers, motors and actuators, fluid power, etc. and provides a preview of the other ELT classes that cover those subjects.

Prerequisite: ELT 2358.

ELT 2437 - Vacuum & Power RF Systems (3)
Covers vacuum systems and RF (radio frequency) energy sources in the manufacture of semiconductor devices. Includes gas laws and gas properties, vacuum pumps, gauges and valves, and leak detection techniques. Addresses plasma physics, RF generators, transmission lines, RF interference, and safety.

Prerequisite: ELT 1206.

EMS - Emergency Medical Services

EMS 1015 - Emergency Medical Responder (3)
Provides the student with core knowledge and skills to function in the capacity of a first responder arriving at the scene of an emergency, providing supportive care until advanced EMS help arrives. This course was formerly known as First Responder.

EMS 1021 - EMT Fundamentals (3)
Introduces the Emergency Medical Technician (EMT) student to prehospital emergency care. The topics included in this course are Emergency Medical Services (EMS) systems, well-being of the EMT, communications, documentation, anatomy, airway management, and patient assessment. Student must be at least 18 years of age.

EMS 1022 - EMT Medical Emergencies (4)
Provides the Emergency Medical Technician (EMT) student with the knowledge and skills to effectively provide emergency care and transportation to a patient experiencing a medical emergency. This course focuses on the integration of the physical exam, medical history, and pathophysiology when assessing and treating the medical patient. Student must be at least 18 years of age.

Prerequisite: Prerequisite/Corequisite: EMS 1021.

EMS 1023 - EMT Trauma Emergencies (2)
Provides the Emergency Medical Technician (EMT) student with the knowledge and skills to provide appropriate emergency care and transportation of a patient who has suffered a traumatic injury. The concepts of kinematics and the biomechanics of trauma, along with pathophysiology and injury patterns will provide the student with the ability to assess and manage the trauma patient. Student must be at least 18 years of age.

Prerequisite: Prerequisite/Corequisite: EMS 1021.

EMS 1024 - EMT Special Considerations (2)
Provides the Emergency Medical Technician (EMT) student with the knowledge and skills required to modify the assessment, treatment, and transportation of special patient populations and patients in special circumstances. This course also provides an overview of incident command, mass casualty incidents, vehicle extraction, air medical support, hazardous materials, and terrorism. Student must be at least 18 years of age.

Prerequisite: Prerequisite/Corequisite: EMS 1021.

EMS 1026 - 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.

EMS 1050 - Pediatric Ed for Prehospital Professionals (1)
Provides the student with core knowledge and skills necessary to provide emergency care to the pediatric patient.

EMS 1070 - EMT Clinical (1)
Provides the EMT student with the clinical experience required for initial certification and some renewal processes.

Prerequisite: Prerequisite/Corequisite: EMS 1021.

EMS 1080 - EMT Clinical Internship (2)
Provides the Emergency Medical Technician (EMT) with a supervised clinical learning experience that goes beyond the initial EMT requirements for the State of Colorado Department of Health. Enables the student to work with an assigned preceptor for 90 hours of clinical experience to develop an understanding of the role and responsibilities of the EMT-Basic.

EMS 1132 - EMS IV/IO Therapy (2)
Focuses on cognitive and skill practice for the Colorado scope of practice for the IV/IO endorsement as outlined in the Intravenous/Intraosseous Therapy and Medication Administration course curriculum.

EMS 1138 - Basic EMS Simulation Lab (3)
Integrates the knowledge and skills learned during Emergency Medical Technician (EMT) training. The participants will be exposed to the environment they will function in upon completion of their Emergency Medical Service (EMS) education. Participants will be expected to manage all aspects of an EMS call at the basic life support level from the time of dispatch to patient transfer. This will include radio, verbal and written communications; legal and ethical issues; response activities; scene assessment and management; patient interaction, assessment, and treatment; patient disposition; and preparation

for the next call. Simulations are realistic representations of calls an EMT may encounter, and are conducted in "real time". There is no verbalization of any aspect of the call. Unless a safety issue exists, there is no instructor interaction with the learner until the call is complete and the debriefing session occurs. The knowledge base for this course is based on current EMT certification.

EMS 1140 - Advanced EMS Simulation Lab (3)
Builds upon the knowledge gained in the basic simulation lab. The participants will be exposed to the environment they will function in upon completion of their Emergency Medical Service (EMS) education. Participants will be expected to manage all aspects of an EMS call at the advanced life support level from the time of dispatch to patient transfer. This will include radio, verbal and written communications; legal and ethical issues; response activities; scene assessment and management; patient interaction, assessment, and treatment; patient disposition; and preparation for the next call. Simulations are realistic representations of calls an advanced life support clinician may encounter, and are conducted in "real time". There is no verbalization of any aspect of the call. Unless a safety issue exists, there is no instructor interaction with the learner until the call is complete and the debriefing session occurs. The knowledge base for this course is based on current EMT certification, information gained during the basic simulation lab, and knowledge and skills acquired from advanced life support classes.

EMS 2020 - 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.

ENG - English

ENG 0090 - Composition and Reading (3)
Integrates and contextualizes college-level reading and writing.

ENG 0091 - Composition and Reading Lab (1)
Supports skill development for students in ENG 0092 College Composition and Reading. The course includes any foundational skills needed by the student. Any student enrolled in ENG 0091 is required to co-enroll in ENG 0092.

Corequisite: ENG 0092.

ENG 0093 - Studio D (3)
Integrates and contextualizes reading and writing strategies tailored to a co-requisite 100-level course within one or more of the four discipline strands. The four discipline strands are defined as: Communications, Science, Social Science, and Arts and Humanities. Non-GT courses are not eligible for this consideration.

Corequisite: 100-Level GT course as offered by campus/section.

ENG 0094 - Studio 1021 (3)
Integrates and contextualizes reading and writing strategies tailored to co-requisite ENG 1021 coursework.

ENG 1015 - Technical English & 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.

ENG 1021 - English Composition I: GT-CO1 (3)
Emphasizes the planning, writing, and revising of compositions, including the development of critical and logical thinking skills. This course includes a wide variety of compositions that stress analytical, evaluative, and persuasive/argumentative writing. This is a statewide Guaranteed Transfer course in the GT-CO1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-CO1).

ENG 1022 - English Composition II: GT-CO2 (3)
Expands and refines the objectives of English Composition I. Emphasizes critical/logical thinking and reading, problem definition, research strategies, and writing analytical, evaluative, and/or argumentative compositions. This is a statewide Guaranteed Transfer course in the GT-CO2 category.

Prerequisite: ENG 1021 or ENG 1031. Offered: *(GT-CO2).

ENG 1031 - Technical Writing I: GT-CO1 (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. This is a statewide Guaranteed Transfer course in the GT-CO1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-CO1).

ENG 1032 - Technical Writing II (3)
Expands and refines the objectives of ENG 1031, emphasizing formal presentations, both written and oral.

ENG 2001 - English Composition III: GT-CO3 (3)
Provides the skills necessary to enter into higher-level undergraduate academic discourse or professional workplace writing. This course extends rhetorical knowledge and develops critical reading, thinking, and writing strategies in multiple specialized areas of discourse beyond what is encountered in previous composition courses. This is a statewide Guaranteed Transfer course in the GT-CO3 category.

Offered: *(GT-CO3).

ENG 2021 - Creative Writing I: GT-AH1 (3)
Examines techniques for creative writing by exploring imaginative uses of language through creative genres (fiction, poetry, and other types of creative production such as drama, screenplays, graphic narrative, or creative nonfiction) with emphasis on the student's own unique style, subject matter and needs. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

ENG 2022 - Creative Writing II (3)
Provides continued development of written expression in the creative genres (fiction, poetry, and other types of creative production such as drama, screenplays, graphic narrative, or creative nonfiction) with emphasis on the student's own unique style, subject matter and needs. This course is a creative writing

workshop centered around producing and critiquing creative work.

ENG 2026 - Fiction Writing (3)
Provides techniques for analyzing and writing fiction, including the study of form and technique with an emphasis on the writing process.

ENG 2027 - Poetry Writing (3)
Provides strategies for analyzing and writing poetry, including the study of form and craft with an emphasis on the revision process. Sample texts will cover a diverse range of works from various cultures and perspectives.

ENG 2028 - 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.

ENG 2030 - Creative Nonfiction (3)
Introduces creative nonfiction and the writing of essays by using creative techniques, such as the personal essay, memoir, and literary journalism. This course provides techniques for analyzing and writing creative nonfiction, including the study of form and technique, and the creative writing process.

ENG 2031 - Literary Magazine (3)
Covers the production of a literary magazine through skill building and collaboration. This course introduces the editorial process involved in preparing a literary magazine for publication, including soliciting submissions; selecting material for publication (fiction, nonfiction, poetry, visual art, and other genres, such as drama); preparing a manuscript for publication, including design, layout, and pre-press production; and marketing the final product.

ENG 2038 - Writing the Novel I (3)
Learn the art and craft of writing a literary novel through intensive study of the process of developing long form narrative. Explore techniques for outlining plot, developing characters, and establishing setting. Workshops will emphasize critical review of students' own creative writing and all participants will develop and refine their critical vocabulary and methodology.

ENP - Entrepreneurship

ENP 1005 - Introduction to Entrepreneurship (3)
The student will evaluate the business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. The student will understand the role of entrepreneurial businesses in the United States and the impact on our national and global economy.

ENP 1006 - E-Ship Opportunity Feasibility Study (3)
Determines if a business venture is feasible based on personal, professional, and financial goals. This course will help to identify and analyze the present climate for business ideas through an industry analysis, target market analysis, competitive analysis, and financial analysis.

ENP 2005 - Marketing for the Entrepreneur (3)
Covers marketing strategies to launch and sustain an entrepreneurial venture. This course will include topics on marketing entrepreneurial ventures utilizing innovative and financially responsible marketing strategies. This course will help students to develop an understanding of entrepreneurial marketing goals and objectives. The course covers marketing principles and electronic marketing.

ENP 2006 - Entrepreneurship Legal Issues (3)
Explores legal issues related to business entities including sole proprietorship, general partnerships, limited partnerships, and corporations. This course reviews articles of incorporation and the filing process, employment law, property, landlord tenant rights and duties, and business insurance.

ENP 2007 - Entrepreneurship Financial Topics (3)
This is a comprehensive course covering financial situations for business. Financial topics will include employee benefits, retirement planning, budgeting, creation of financial statements, and learning how to work with an accounting professional. Other topics will include tax, sales and use tax, payroll tax and unemployment tax.

ENV - Environmental Sciences

ENV 1010 - Natural Disasters: GT-SC2 (3)
Introduces different types of natural hazards, their causes, effects, and what can be done to reduce the risks to human populations. Scientific advances related to understanding, predicting, and preparing for natural disasters are discussed. This course also covers anthropogenic changes to Earth systems, which may be increasing the frequency and severity of these events. This is a statewide Guaranteed Transfer course in the GT-SC2 category.

Offered: *(GT-SC2).

ENV 1111 - Environmental Science w/Lab: GT-SC1 (4)
Introduces the basic concepts of ecology and the relationship between environmental problems and biological systems. This course includes interdisciplinary discussions on biology, chemistry, geology, energy, natural resources, pollution, and environmental protection. A holistic approach is used when analyzing how the foundations of natural sciences interconnect with the environment. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

ETH - Ethnic Studies

ETH 2000 - Intro to Ethnic Studies: GT-SS3 (3)
Introduces students to the issues of race and ethnicity. Emphasizes ethnic relations in the United States as it pertains to four major groups: Americans of African, Asian, Latino and

Native descent. Explores issues of racial and ethnic identity, racism and discrimination, stereotyping, prejudice, segregation, colonialism, integration and acculturation.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

ETH 2012 - 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.

ETH 2024 - Introduction to Chicano Studies (3)
Introduces students to skills development in multicultural education. Covers Chicano history, migration and labor, education, law and Chicano culture.

FER - Fermentation Science

FER 1001 - Craft Beer Brewing (4)
Examines fermentation science of craft beer brewing industry with an emphasis on wort production, yeast fermentation process, beer contaminants and how to avoid them, brewery cleaning, maintenance and environmental impact. The laboratory experience includes basic microbiological/scientific techniques and brewery experiences. Students MUST be 21 or older to enroll in this class.

FER 1002 - Beer Styles & Sensory Analysis of Beer (1)
Explores beer styles of the world through sensory tests. Guided tastings will examine the effects of the raw materials on beer flavor and aroma and connect with the historical perspective. Also includes discussion of organizing sensory tastings, brief description of how beer is made, and major off flavors that can develop during production. Students MUST be 21 or older to enroll in this class.

FER 2001 - Wine Fundamentals (4)
Examines the manufacture of wines, styles of wines in global wine regions, microbiological science of wine fermentation and organoleptic perception of wines. Class activities emphasize reading wine labels, using language to describe different wines, and descriptions of common wine defects through sensory analysis of wines. Students MUST be 21 years or older to take the class.

FER 2003 - Fermented Foods Science (4)
Explores the history and science of fermented foods. Course includes food fermentation lab experiences with dairy, vegetables, sugars and grains. Examines how fermented foods have been used for preservation of food, health attributes and cultural significance.

FIN - Finance

FIN 1010 - Introduction to Finance (3)
Examines the financial markets, financial instruments and the actors in these markets. The course covers the use of time value of money and other financial models to value different types of capital, financial data to analyze performance and to examine capital budgeting alternatives, and analyzes working capital needs and costs.

FIN 2010 - 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.

FLD - Floral Design

FLD 1000 - 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.

FLD 2000 - Advanced Floral Design (3)
Focuses on advanced floral design concepts and techniques including special event, wedding and sympathy arrangements.

FLD 2089 - Capstone (4)
Focuses on a demonstrated culmination of learning within the floral design program of study.

FRE - French

FRE 1001 - 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.

FRE 1002 - Conversational French II (3)
Continues the sequence for beginning students who wish to understand and speak French. Covers basic conversational patterns, expressions, and grammar.

Prerequisite: FRE 1001.

FRE 1011 - French Language I (5)
Develops students' interpretive, interpersonal, and presentational communicative abilities in the language. Integrates these skills in the cultural contexts in which the language is used. Offers a foundation in the analysis of culture.

FRE 1012 - French Language II (5)
Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.

Prerequisite: FRE 1011.

FRE 2011 - French Language III: GT-AH4 (3)
Continues the development of increased functional proficiency at the intermediate level in speaking, aural comprehension, reading, writing, and cultural competency in the French language. This course is conducted predominantly in French. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: FRE 1012. Offered: *(GT-AH4).

FRE 2012 - French Language IV: GT-AH4 (3)
Continues the development of increased functional proficiency at intermediate mid-level in speaking, aural comprehension, reading, writing, and cultural competency in the French language. This course is conducted predominantly in French. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: FRE 2011. Offered: *(GT-AH4).

FSW - Fire Science Wildland

FSW 1000 - S-190 Introduction to Wildland Fire (1)
Provides instruction in the primary environmental factors that affect the start and spread of wildfire and recognition of potentially hazardous situations. This course must be taken concurrently with FSW 1001 Firefighting Training S-130. You must also sign up for FSW 1001 S130 to qualify for a red card.

FSW 1001 - S-130 Firefighting Training (2)
Provides entry-level firefighter skills. A version of the L-180, Human Factors on the fireline, is included as part of the course. Credit will be issued for S-130. This course must be taken concurrently with FSW 1000. You must also take FSW 1000 S-190 to qualify for a red card.

FSW 1033 - Wildland Fire Practitioner Lab (1)
Develops critical skills for wildland firefighters. Students receive instruction on the concepts of Multi-Disciplinary Resilience (MDR) including, tactical leadership, operational stress management and self-care, fire technology, and ignition patterns.

Corequisite: FSW 1000 and FSW 1001.

FSW 1043 - S-212 Wildfire Chain Saws (2)
Provides introduction to the function, maintenance and use of internal combustion, engine-powered chain saws and their tactical wildland fire application. Modules support entry-level training for firefighters with little or no previous experience in operating a chain saw and provides hands-on cutting in surroundings similar to fireline situations. Must have S190 and S130 certifications or currently be enrolled in FSW 1000 and FSW 1001.

Prerequisite: FSW 1000 and FSW 1001 effective Summer 2015.

GEO - Geography

GEO 1005 - World Regional Geography: GT-SS2 (3)
Examines the spatial distribution of environmental and societal phenomena in the world's regions. Environmental phenomena includes topography, climate, and natural resources. Societal phenomena includes patterns of population and settlement, religion, ethnicity, language, and economic development. This course also analyzes the characteristics that define world regions and distinguishes them from each other. This course examines the relationships between physical environments and human societies, and examines globalization, emphasizing the geopolitical and economic relationships between more developed and less developed regions. This is a statewide Guaranteed Transfer course in the GT-SS2 category.

Offered: *(GT-SS2).

GEO 1006 - Human Geography: GT-SS2 (3)
Introduces geographic perspectives and methods in the study of human societies by examining the spatial characteristics of populations, language, religion, ethnicity, politics, and economics. This course examines the relationships between physical environments and human societies. This is a statewide Guaranteed Transfer course in the GT-SS2 category.

Offered: *(GT-SS2).

GEO 1011 - Physical Geography: Landforms w/Lab: GT-SC1 (4)
Examines the principles of Earth's physical processes, emphasizing landforms, soils, and hydrology. Examines the formation and distribution of landforms, such as mountains, valleys, and deserts, and their shaping by fluvial and other processes. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Offered: *(GT-SC1).

GEO 1012 - Phys Geo: Weather, Climate, Eco w/Lab: GT-SC1 (4)
Introduces the principles of meteorology, climatology, ecology, and regional climate classification. The course investigates the geographic factors which influence climate and ecosystems such as topography, elevation, winds, ocean currents, and latitude. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Offered: *(GT-SC1).

GEO 1060 - Global Climate Change: GT-SC2 (3)
Presents global climate change from an Earth science perspective including explorations of paleoclimatology, atmospheric science, vegetation, fluvial systems, and oceanic circulation. Analyze observed and predicted impacts of climate change on the world's terrestrial regions. Examine interrelationships among economy, society, and public policy as well as geographic variation in greenhouse gas emissions at national and regional scales. Also discussed will be efforts to mitigate climate change and its causes and/or adaptations to global climate change.

GEO 1065 - Human Ecology (3)
Provides a current outlook for the global environment, describing the threats imposed on different natural ecological systems. Students develop ways of thinking about the environment to evaluate environmental problems.

GEO 2000 - Geography of Europe (3)
Presents a comprehensive study of European geography including physical, historical, agricultural, industrial, cultural and political geographic inter-relationships. This course incorporates a broad overview of the forces and trends that have shaped modern Europe.

GEO 2010 - Careers & Research in Geosciences (1)
Introduces students to current research, research tools, techniques, and terminology within the geosciences. Explores and prepares students for outside internship opportunities for community college students in the geosciences and related fields. Explores different professions within the geosciences. Explains different coursework needed to best achieve academic success at four-year universities and careers beyond graduation. Provides experience preparing resumes and completing internship and job applications.

GER - German

GER 1001 - 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.

GER 1002 - Conversational German II (3)
Continues the sequence for students who wish to understand and speak German. Covers basic patterns, expressions, and grammar.

Prerequisite: GER 1001.

GER 1011 - German Language I (5)
Develops students' interpretive, interpersonal, and presentational communicative abilities in the language. Integrates these skills in the cultural contexts in which the language is used. Offers a foundation in the analysis of culture.

GER 1012 - German Language II (5)
Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.

Prerequisite: GER 1011.

GER 2001 - Conversational German III (3)
Continues the sequence for students to advance their study of understanding and speaking German. Focuses on intermediate level vocabulary, grammar, and expressions.

Prerequisite: GER 1002.

GER 2002 - Conversational German IV (3)
Continues the sequence for students to advance their study of understanding and speaking German. Focuses on intermediate level conversational patterns, expressions, and grammar.

Prerequisite: GER 2001.

GER 2011 - German Language III: GT-AH4 (3)
Continues the development of increased functional proficiency at the intermediate level in speaking, aural comprehension, reading, writing, and cultural competency in the German language. This course is conducted predominantly in German. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: GER 1012. Offered: *(GT-AH4).

GER 2012 - German Language IV: GT-AH4 (3)
Continues the development of increased functional proficiency at intermediate mid-level in speaking, aural comprehension, reading, writing, and cultural competency in the German language. This course is conducted predominantly in German. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: GER 2011. Offered: *(GT-AH4).

GER 2035 - 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.

Prerequisite: GER 1012.

GEY - Geology

GEY 1108 - Geology of National Parks: GT-SC2 (3)
Explores significant geologic features and the processes that create them using examples and case studies from the U.S. National Park System. Weathering and erosional landforms, caves and reefs, coasts, glaciers, volcanoes, and complex mountains are discussed. Fundamental geologic concepts including plate tectonics, deep time, and rock classification are introduced and incorporated throughout the course. This is a statewide Guaranteed Transfer course in the GT-SC2 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC2).

GEY 1111 - Physical Geology w/Lab: GT-SC1 (4)
Introduces the major topics of geology. Course content encompasses Earth's materials, structure, and surface landforms. Geologic time and the geologic processes responsible for Earth's internal and external features are covered. This course includes laboratory experience. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

GEY 1112 - Historical Geology w/Lab: GT-SC1 (4)
Covers the development of Earth through the vast span of geologic time. Emphasis is on the investigation and interpretation of sedimentary rocks and features, the record of ancient environments, fossil life forms, and physical events in Earth's history within the framework of plate tectonics. This course includes laboratory experience. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: GEY 1111 and College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

GEY 1135 - Environmental Geology w/Lab: GT-SC1 (4)
Introduces the subject of geology as it relates to human activities. Geologic hazards such as floods, landslides, earthquakes, and volcanoes are investigated. Mineral, energy, soil, and water resources are discussed in terms of their geologic formation and identification, usage by society, and associated environmental impacts. Land use issues, waste, and pollution are also examined. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

GEY 2205 - Geology of Colorado (3)
Covers the geologic history of Colorado and notable geologic features present in the state. Emphasis is on the formation of mountain ranges, significant rock types, ore deposits, fossils, and landforms.

GEY 2208 - Geology Field Studies (3)
Involves in-depth field studies of the geology of a specific region in the United States. Field trips lasting less than a week constitute the major activities of the course. The specific area of investigation is indicated in the schedule of classes each time the course is offered.

GIS - Geographic Information Systems

GIS 1001 - Introduction to Geographic Information Systems (3)
Surveys the development, application and use of geographic information systems (GIS).

GIS 1010 - Intro to Cartography for GIS (3)
Examines a broad range of map types, emphasizing maps as a communication system with both symbology and specific organizational hierarchies. Discussion and demonstration focuses on essential cartographic principles and practices used for designing maps, with emphasis on cartographic principles resulting in the effective map communication, qualitative messages, and quantitative information.

GIS 1031 - Global Positioning Sys for GIS (3)
Introduces the terminology, hardware, and technological principles of GPS. Students will receive an introduction in the fundamentals of using a basic hand-held GPS unit. Data will be integrated with pre-existing spatial data. Fundamentals of mapping and map reading will be covered. Garmin GPS units will be used initially, followed with Trimble GeoExplorers and Pathfinder Office software. Final student projects integrate GPS data within ArcView projects.

GIS 1040 - Vector Based GIS (3)
Focuses on vector-based Geographic Information Systems (GIS) concepts utilizing critical thinking and technology literacy. This accelerated introductory GIS course provides a solid technical and conceptual base for a future career in the geospatial sciences.

GIS 1050 - Relational Database Mgmt for GIS (3)
Develop methods and procedures for geographic information systems data, data management, and the complex relationships between data files and a GIS. This course teaches several essential components and methods of successful data and project data management. The objective is to give students a basic understanding of databases, how they are used in a professional GIS environment, and practical experience in designing and implementing the GIS database portion of a GIS.

GIS 1065 - GIS Project Management (3)
Examine the relationships of geographic information systems projects to information technologies for organization planning and decision making. Course considers project business process, project management methods and roles of project participants.

Prerequisite: GIS 1001 OR GIS 1040.

GIS 2005 - GIS Applications (3)
Develops student competency in web based geospatial information technologies. This course introduces students to concepts and processes of software based geospatial services to deliver geospatial information over networks. The course provides a comprehensive discussion of theory and applied technology of GIS software information services as well as integration of geospatial services into GIS applications.

Prerequisite: GIS 1001 OR GIS 1040.

GIS 2010 - Intermediate Geographic Information Systems (3)
Build on the spatial analysis principles and concepts of GIS 1001. Students work with advanced analytical tools and develop skills in spatial problem solving.

Prerequisite: GIS 1001.

GIS 2011 - Spatial Data Modeling & Analysis for GIS (4)
Examine techniques for modeling and analyzing spatial data in a GIS. Topics include defining object models and geodatabases as they are used to access geographic data and build data models, creating new information from existing data through data classification, geoprocessing, presentation, and display and using raster analysis to display and analyze spatial data.

Prerequisite: GIS 1001 OR GIS 1040.

GIS 2012 - GIS Remote Sensing - Digital Image (4)
Introduce concepts and procedures used in remote sensing with an emphasis on integration of aerial and satellite imagery into GIS applications. Apply the science of remote sensing and imagery interpretation to understand local to global earth observation characteristics based on remotely sensed data and logical interpretation.

Prerequisite: GIS 1001.

GIS 2035 - INT Remote Sensing/Image Analysis (4)
Introduces concepts and procedures of the science of remote sensing. The course applies the methods of image analysis using computer-based processing and computer assisted image interpretation. The results are applied to a wide spectrum of conditions and processes affecting the Earth's surface and human infrastructure. The course integrates the results of image analysis with other data in Geographic Information Systems (GIS) to provide this new information to users in industry, government, and the scientific research community.

GIS 2040 - Raster Based GIS (3)
Focuses on raster-based, advanced vector-based, and other geospatial data type concepts, processes, and analysis. This advanced GIS course transitions from step-by-step lab instructions to independent objective-based analysis utilizing a combination of prepared lab materials, developing industry standard workflows, documentation, and metadata.

GIS 2042 - UAS Operations/Data Processing (3)
Introduces operations and data post-processing associated with Unmanned Aerial Vehicles (UAVs). Safe operation and adherence to pre-flight checklists will be essential. Preparation for CFR Title 14 Part 107 exam topics is included during lecture to facilitate understanding of how quality data collection creates superior products. Data collection as Remote Pilot in Command and Visual Observer allows practice with various UAV platforms. Data post-processing allows production of high-quality data.

GIS 2060 - GIS Survey I (3)
Examines fundamental concepts of surveying and mapping, incorporating survey measurements, geographic information

science data, statistical measures, error assessment and basic horizontal and vertical survey measurements.

Prerequisite: GIS 1031 and (GIS 2010 OR GIS 2040).

GIS 2061 - GIS Survey II (3)
Examines applied surveying operations and mapping incorporating survey measurements, statistical measures, error assessment and applied survey process.

Prerequisite: GIS 2060.

GIS 2080 - Internship (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

GIS 2089 - Capstone (3)
Provides a demonstrated culmination of learning within a given program of study.

GIS 3001 - GIS for Natural Sciences (3)
Evaluates topics and practices central to natural sciences and resource management, utilizing GIS to examine the practices of spatial analysts in various fields. Utilizing a module-based layout, major topics in natural sciences including conservation, resource planning, wildlife, and forestry will be examined independently, focusing on the unique practices and toolsets within GIS for each.

Prerequisite: GIS 2010 OR GIS 2040.

GIS 3005 - Programming for GIS (3)
Introduces students to basic computer programming concepts that can be used in a GIS environment. Develops the programming skills needed to create scripts for automating GIS data management and analysis, accessing spatial data and properties, performing queries, retrieving data values from tables, and incorporating logic and looping. Emphasizes best practices for writing code, error handling, and demonstrates how to share and publish these scripts. Programming experience not required, but may be helpful.

Prerequisite: GIS 2005 and (GIS 2010 OR GIS 2040).

GIS 3011 - Advance Spatial Analysis (4)
Expands on spatial analysis knowledge and application to focus on geostatistical techniques including interpolation, spatial statistics, and regression. Examines the theories behind these techniques and puts them into practice. Multiple approaches to performing these analyses will also be explored.

Prerequisite: GIS 2011 and (GIS 2010 OR GIS 2040).

GIS 3012 - Advanced Remote Sensing (4)
Builds on the knowledge of remote sensing fundamentals and basic image analysis. Discusses and applies the concepts and computer-based methods of advanced information extraction from remotely sensed data with emphasis on the analysis and integration of data from multiple sources at local to global scales.

Prerequisite: (GIS 2010 OR GIS 2040) and (GIS 2012 OR GIS 2035).

GIS 3035 - Geospatial Statistics (4)
Analyzes methodology in spatial modeling, estimation, and prediction with a focus on spatial-temporal processes. Provides students the skills necessary to investigate geographically represented data using five broad topical areas: (1) point pattern analysis; (2) area data analysis; (3) continuous data analysis; (4) spatial sampling; and (5) multivariate spatial and temporal analysis.

Prerequisite: MAT 1260 and (GIS 2010 OR GIS 2040).

GIS 3050 - Advanced Database for GIS (4)
Expands on students existing database knowledge to analyze and evaluate GIS data, compare data structures and formulate plans as to how they can combine, synthesize and transform data into a state appropriate for GIS analysis. Students will contrast data models, build methods for measuring data quality and increase their efficiency in designing data related workflows.

Prerequisite: GIS 1050 and (GIS 2010 OR GIS 2040).

GIS 4010 - Geomorphology and GIS (4)
Constructs a knowledge base of surficial earth system processes for informing spatial analysis. Concepts of landform development and evolution will be addressed in desert, mountainous, arctic and other environments through the lens of a GIS. Multiple spatial analysis techniques will be applied throughout the course in the context of each geomorphologic focus. Other geomorphological methodologies will be examined to extend the scope of GIS analysis beyond physical processes to include environmental and social factors.

Prerequisite: (GIS 2010 OR GIS 2040) and (GEY 1135 OR GEO 1011).

GIS 4011 - Hydrology Analysis with GIS (4)
Examines hydrology concepts and the various methods used for conducting hydrologic analysis with GIS. Studies the techniques used for stream and watershed delineation, groundwater modeling, floodplain delineation, and modeling water runoff. Techniques will be tied to practical applications in a variety of fields. Visualization of these datasets in 2D and 3D will also be explored.

Prerequisite: (GIS 2010 OR GIS 2040) and (GEY 1135 OR GEO 1011).

GIS 4012 - Photogrammetry and LiDAR (4)
Introduces the basic principles of photogrammetry and the development of the photogrammetric technologies. Discusses the typical geometry of an aerial photograph and the basic mathematical functions and formulations used in photogrammetry. Acquisition of aerial imagery and the accuracy and precision of measurements will be covered. Investigates the differences between a map and a photograph and the reasons for these differences. Increase understanding of photogrammetry by exploring examples of use.

Prerequisite: (GIS 2010 OR GIS 2040) and (GIS 2012 OR GIS 2035).

GIS 4088 - Practicum (4)
Provides students an opportunity to gain practical experience in applying their educational skills and/or to develop specific skills in a practical work setting. The instructor will work with the student to select an appropriate work site, establish learning

objectives and to coordinate learning activities with the practicum supervisor.

Prerequisite: (GIS 1001 OR GIS 1040), GIS 1010, GIS 1031, GIS 1050, GIS 1065, (GIS 2010 OR GIS 2040), (GIS 2012 OR GIS 2035), GIS 2011, GIS 2005, MAT 1260, ENG 1021.

HEQ - Heavy Equipment

HEQ 1040 - Heavy Equipment Operations I (6)
Introduces basic operation and safety of heavy equipment including utility tractors. Basics of earthmoving, grading, and other aspects of the trade are also covered.

HIS - History

HIS 1110 - The World: Antiquity-1500: GT-HI1 (3)
Explores trends within events, peoples, groups, ideas, and institutions in World History from antiquity to 1500. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This course focuses on common cultural trends. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 1120 - The World: 1500-Present: GT-HI1 (3)
Explores trends within events, peoples, groups, ideas, and institutions in World History since 1500 as well as on common cultural trends. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through the perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 1210 - U.S. History to Reconst: GT-HI1 (3)
Explores trends within events, peoples - including Native American - groups, ideas, and institutions in North America and the United States to Reconstruction. This class focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 1220 - U.S. History Since Civil War: GT-HI1 (3)
Explores trends within events, peoples, groups, ideas, and institutions since the American Civil War. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 1310 - Western Civ: Antiquity-1650: GT-HI1 (3)
Explores trends within events, peoples, groups, ideas, and institutions in Western Civilization from antiquity to 1650. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 1320 - Western Civ: 1650-Present: GT-HI1 (3)
Explores trends within events, peoples, groups, ideas, and institutions in Western civilization since 1650. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2000 - History of Science and Tech: GT-HI1 (3)
Explores the complex relationship between scientific and technological developments and western society and culture. It emphasizes the way social and cultural norms can impact scientific or technological progress, and vice-versa, especially in the period since the Scientific Revolution. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2005 - Women in World History: GT-HI1 (3)
Examines the roles, experiences, and contributions of women in world history and explores ways in which women's history modifies the traditional interpretations of historical events. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: (GT-HI1).

HIS 2015 - 20th Century World History: GT-HI1 (3)
Investigates the major political, social, and economic developments, international relationships, scientific breakthroughs, and cultural trends that have shaped the various global regions, empires, and nation-states since the late nineteenth century. This course focuses on developing,

practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2105 - Women in U.S. History: GT-HI1 (3)
Examines women's changing roles in American history. It explores the nature of women's work and the participation of women in family, political, religious, and cultural activities and in social reform movements. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2110 - African American History: GT-HI1 (3)
Explores the experiences and contributions of African Americans from the colonial period to the present through 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. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2115 - American Indian History: GT-HI1 (3)
Analyzes historical and socio-cultural change for Native Americans from pre-colonial America to the present, emphasizing those processes and relations with non-Native Americans which have contributed to current conditions. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2120 - U.S. Foreign Relations History: GT-HI1 (3)
Surveys 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. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through the perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2125 - American Environmental History: GT-HI1 (3)
Discovers and analyzes the relationships between Americans and their natural environments throughout the history of the United States. This course examines the development of conservation movements and environmental policies in modern America. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through the perspective of gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: (GT-HI1).

HIS 2130 - History of American West: GT-HI1 (3)
Traces the history of the American West from Native American cultures to the present. It explores the frontier experiences of America's earliest, eastern settlers through the Trans-Mississippi West across the great exploratory and wagon trails including cities, ranching, reservation, resource management, and industry. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2135 - Colorado History: GT-HI1 (3)
Presents the story of the people, society, and cultures of Colorado from its earliest Native Americans, through the Spanish influx, the explorers, the fur traders, mountain men, the gold rush, railroad builders, the cattlemen and farmers, the silver boom, the tourists, and the modern state. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2140 - Civil War Era American History: GT-HI1 (3)
Explores the causes, course, and consequences of the American Civil War. Students will examine four broad themes: union and disunion; slavery, race, and emancipation; the experience of modern war for individuals and society; and the challenges of Reconstruction. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: (GT-HI1).

HIS 2145 - U.S. History Since 1945: GT-HI1 (3)
Examines the major political, economic, social, and cultural developments that have shaped modern America from 1945 to the present. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2200 - History of Latin America: GT-HI1 (3)
Focuses on the major political, economic, social, and cultural influences that have shaped Latin America from pre-European conquest to the present. Emphasizes the early history of Latin America but connects it to the present. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2210 - History of Mexico: GT-HI1 (3)
Focuses on the major political, economic, social, and cultural developments of Mexico from Pre-Columbian times to the present. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2300 - The Middle Ages: GT-HI1 (3)
Examines 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. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2310 - History Christianity in the World: GT-HI1 (3)
Surveys the history of Christianity and its impact on the world from its Jewish origins, into its European expansion, and ending with its modern global presence. This course analyzes foundational theology, the impact of significant events on faith, the influence of Christianity in art and culture, and the role of key people in their historical contexts. This course inspects Christianity's relationship with Judaism, Islam, Enlightenment, modernity, moral systems and values. Guaranteed Transfer in GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2320 - 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).

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher.

HIS 2500 - History of Islamic Civiliz: GT-HI1 (3)
Surveys the tenets of Islam and the political, social and cultural history of the civilizations that embraced it from the 6th century to the modern day, including the diversity by looking at legal systems, scientific and artistic accomplishments, philosophical heterogeneity and political developments. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2510 - Modern Middle East: GT-HI1 (3)
Focuses the political, economic, social, and cultural development of the Middle East from the late Ottoman Empire to the present. It explores the influences of Islam as well as Western ideas and involvement upon institutions of modern Middle Eastern society, and reflects the multiple perspectives of gender, class, and ethnic groups. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2610 - History of Modern China: GT-HI1 (3)
Explores the political, ideological, economic, religious, social, and cultural developments of modern China from the Qing dynasty through the political and economic revolutions of the 20th century. This course focuses on developing, practicing, and strengthening skills historians use while constructing knowledge and studying a diverse set of narratives through perspectives such as gender, class, religion, and ethnicity. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-HI1).

HIS 2765 - Writing About History: GT-CO3 (3)
This course develops the skills of historical writing, including the use of rhetorical devices in persuasive historical arguments, critical analysis of historical problems, writing and revision of multiple drafts, different technologies of research and writing, and evaluation of historical sources for relevance and reliability. Through reading a variety of secondary and primary sources and engaging in several types of historical writing and conversations, students extend their understanding of the conventions of clear

and concise writing about history. They also devise strategies to communicate historical information by identifying workable topics, locating and annotating primary and secondary sources in libraries, archives and published materials, and adapting their writing style to communicate with a variety of audiences.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: (GT-CO3).

HIT - Health Information Technology

HIT 1001 - Health Information Management Science (3)
Introduces the student to the health record, from inception to completion. Emphasis is on content and regulations impacting the health record in the various settings. Other areas to be discussed include the electronic health record and responsibilities of the Health Information Department. This course also examines various health care delivery systems and health care practitioners. Professional and practice-related ethical issues are discussed, as well as evaluating the consequences of a breach of healthcare ethics.

HIT 1005 - Principles of Healthcare Reimbursement (3)
Provides students with the knowledge needed to perform necessary tasks involved in healthcare reimbursement systems including payment methodologies, use of clinical data, and compliance.

HIT 1011 - Health Data Management & Information Systems (3)
Introduces the electronic health record (EHR) components and health informatics including infrastructure, privacy, security and legal implications. Federal involvement and its impact on information technology regarding health data will be discussed. Students will study the roles and relationships, in the transformation of data into meaningful information, through research, vital statistics and epidemiology. Data quality, integrity, collection, access, and retention will also be emphasized.

Prerequisite: Prerequisite/Corequisite: HIT 1001.

HIT 1012 - Legal Aspects for Health Records (2)
Introduces the student to the legal system and defines the role of the healthcare professionals. Specific Federal and State laws are identified and discussed as they relate to the release of medical information.

Prerequisite: Prerequisite/Corequisite HIT 1001.

HIT 1022 - Workflow Fund of Healthcare (3)
Introduces the fundamentals of healthcare workflow, process analysis, and redesign in various healthcare settings. Health information technology culture changes (IT/Clinicians) and project management, including HIT system selection, design, implementation, and support will also be covered. Electronic health record/practice management systems will be evaluated for quality and process improvement, clinical decision support, health information exchange, public health, and population health management in ambulatory and alternative care settings.

Prerequisite: Prerequisite/Corequisite: HIT 1001, HIT 1005, HIT 1011.

HIT 1088 - Health Information Practicum I (2)
Provides a directed clinical experience which focuses on the practice of skills related to the application of legal principles, record analysis and abstraction and record retention and retrieval.

Prerequisite: HIT 1001.

HIT 1089 - Practicum (2)
Provides an opportunity to gain practical experience in applying skills and/or to develop specific skills in a practical work setting. The instructor will work with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the practicum supervisor.

Prerequisite: HIT 1005. Corequisite: HIT 2041.

HIT 2020 - ICD Coding I (3)
Introduces the ICD coding classification system and provides a basic understanding of ICD structure, conventions and principles utilized in code assignment. The student will be introduced to the official coding guidelines. They will apply knowledge of anatomy, physiology, pathophysiology and pharmacology in the assignment of diagnostic and procedural codes.

Prerequisite: BIO 1006 and HPR 1032 and HIT 1005.

HIT 2021 - ICD Coding II (2)
Focus on the intermediate application of ICD structure, conventions and principles utilized to code case scenarios and complex diagnostic and procedural statements. The student will utilize advance application of coding and reporting standards as they apply to coding.

Corequisite: HIT 2020.

HIT 2022 - Quality Management (3)
Introduces the student to the basic concepts of quality management in the healthcare environment. Requirements by regulatory agencies regarding quality documentation, utilization and risk management are discussed. Data collection, verification, analysis, descriptive statistics and presentation techniques will be studied. The course emphasizes the ongoing use of objective data and feedback to improve processes, systems, and patient outcomes. Analysis of documentation for various purposes is also covered.

Prerequisite: HIT 1001. MAT 1140 or higher.

HIT 2025 - Health Information Management (3)
Concentrates on the principles of management as they relate to the administration of the health information management department as part of a health care organization.

Prerequisite: Prerequisite/Corequisite: HIT 1001.

HIT 2031 - ICD Coding III (5)
Provides an advanced study of ICD coding conventions and principles. DRG and case mix logic along with regulations regarding their use in conjunction with optimization and compliance issues will be discussed. CPT/HCPCS in both the hospital-based outpatient and physician office settings will be studied.

Prerequisite: Prerequisite/Corequisite: HIT 2020 and HIT 2021.

HIT 2041 - CPT Coding Basic Principles (3)
Provides the student with skill sets to apply the current procedural terminology (CPT) and HCPCS code set principles and guidelines for application in reporting/communicating information and data about clinical services provided to patients by healthcare providers. Includes understanding what the CPT

nomenclature is, how and why it is used, and guidelines for each code category and how it is applied to represent services within each code category.

Corequisite: HIT 2031.

HIT 2089 - HIT Capstone Course (3)
Provides a demonstrated culmination of learning within a given program of study.

Prerequisite: Prerequisite/Corequisite: HIT 1088.

HLT - Horticulture and Landscape Technologies

HLT 1030 - Landscape Design I (3)
Teaches basic graphic communications and drafting. Introduces design theory and the visual thinking and problem-solving techniques used in landscape design. The course will emphasize peer review of student work.

HLT 1032 - Sustainable Landscaping (3)
Examines the sustainable practices in landscape horticulture including the principles of xeriscape and industry-accepted best management practices and their utilization.

HLT 1050 - Irrigation I (3)
Introduces students to relevant irrigation components and their use, installation and maintenance.

HLT 1051 - Irrigation II (3)
Introduces students to irrigation system best management practices. Topics include electric and hydraulic troubleshooting, repair, efficiency and water conservation practices.

Prerequisite: Prerequisite/Corequisite: HLT 1050. This course and HLT 1050 may be taken at the same time.

HLT 1060 - Greenhouse Management (4)
Covers greenhouse design, systems, management, and the major greenhouse crops and their cultural needs.

HLT 1101 - Introduction to Horticulture (4)
Introduces the biology of horticultural plants, and basic horticultural practices.

HLT 2008 - Pesticide Safety and Use (2)
Familiarizes students with the safe handling of pesticides used in horticulture and the laws and regulations that govern all facets of pesticide use in Colorado. Can be used as preparation for completing the Colorado Department of Agriculture's pesticide licensure exams.

HLT 2010 - Landscape Management (4)
Uses a discussion of landscape maintenance practices and best management practices as a launching point for the student to develop a site management plan and understanding of landscape maintenance contracting. Topics include weed identification, tree and shrub pruning, flower bed maintenance turf care, client care and crew management practices.

HLT 2011 - Arboriculture (3)
Discusses the installation and life-long care of trees in the landscape. Topics include equipment use and care, ANSI tree care standards, industry safety practices, best management practices and tree care industry business practices.

HLT 2021 - Woody Plants: Trees & Conifers (3)
Teaches the identification, landscape usage and culture of regionally adapted deciduous trees and conifers.

HLT 2022 - Woody Plants: Shrubs & Vines (3)
Teaches the identification, landscape usage and culture of regionally adapted shrubs and vines.

HLT 2023 - Annuals, Bulbs, and Grasses (2)
Teaches the identification, landscape usage and culture of regionally adapted annual color crops, ornamental grasses, and bulbs.

HLT 2024 - Herbaceous Perennials (4)
Teaches the identification, landscape usage and culture of regionally adapted herbaceous perennials.

HLT 2026 - Interior Plants (2)
Teaches the identification (common and botanical names), usage and culture of interior plants common to indoor environments. Soil medias, fertilizers, environmental conditions, common pests and diseases and their control will be explored. Industry production and business practices common to this area are also examined.

HLT 2030 - Landscape Design II (3)
Utilizes an understanding of the principles and elements of landscape design as the basis of an exploration of the selection of landscape materials, features and layouts to create functional landscape designs. The course introduces grading plan development and the rendering of hardscape construction details.

Prerequisite: HLT 1030.

HLT 2032 - Landscape Design III (3)
Concludes instruction in the area of landscape design with a consideration of relevant business practices, a final individual project, and the development of a final professional portfolio presentation to a review panel.

Prerequisite: HLT 2030.

HLT 2036 - 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.

HLT 2037 - Landscape Bidding & Estimating (2)
Teaches the process of creating and submitting bids for landscape construction projects. Plan reading, estimating procedures and the bid submission process are all discussed.

HLT 2080 - Internship (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/ coordinator.

HLT 2087 - Cooperative Education (3)
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.

HLT 2102 - Plant Health Care (4)
Introduces the fundamental concepts of integrated pest management and plant health care. Teaches students to diagnose pest and disease problems and formulate site-specific prevention and control strategies.

HLT 2140 - 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.

HLT 2160 - Plant Propagation (4)
Teaches seed and vegetative plant propagation techniques, the biology underlying modern plant propagation practices, and their application in commercial plant production.

HNR - Honors

HNR 1002 - Honors Colloquium I (2)
Develops skills in interdisciplinary scholarly research, writing, and discourse, facilitated by an in-depth study of a major theme. The emphasis is on discussion, projects, and ways of integrating diverse information. This course includes opportunities for students to enhance their critical reflection, argumentation, and collaboration skills, and to explore aspects of cultural diversity in local and global contexts as they investigate the theme from a multi-disciplinary perspective.

HOS - Hospitality Culinary Arts Management

HOS 1010 - Introduction to Hospitality (3)
Introduces learners to careers and the organization and structure of the Hospitality Industry including: hotels, restaurants, non-commercial food service, travel and tourism, conventions and meetings, clubs and other food service entities. Topics include exploring career opportunities, understanding the world of Hotels and Restaurants, Food Service Organizational structures, an introduction to the Meetings Industry, and analyzing the size and scope of the Noncommercial Foods segment.

HOS 1020 - 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.

HOS 1031 - 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.

HOS 1040 - Front Office Procedures (2)
Presents a systematic approach to front office procedures by detailing the flow of business through a hotel beginning with the reservation process and ending with billing and collection processes. This course also places front office management, the process of handling complaints and concerns regarding hotel safety.

HOS 1041 - Convention Management (3)
Prepares students for a management position in the convention industry. The course defines the scope and segmentation of the convention and group business market, describes marketing and sales strategies to attract markets with specific needs, and explains techniques to meet those needs as part of meeting and convention service. The class meets for a total of 45 hours. At the conclusion of the course, students will take a nationally recognized test from the Educational Institute of the American Hotel and Lodging Association.

HOS 1048 - Intro to Food and Beverage (3)
Challenges 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.

HOS 2010 - Event Finances (3)
Examines the concepts and techniques for maximizing event income including ticket fees, retail sales, grants, and sponsorships.

HOS 2021 - Basic Hotel & Restaurant Acct. (3)
Helps to develop a basic understanding of hotel and restaurant accounting procedures, with a focus on the computerized accounting used in today's hospitality accounting situations. You'll learn about taxation of business income, the role of governmental agencies, and how to read and analyze financial statements.

HOS 2042 - 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.

HOS 2051 - 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.

HOS 2055 - Hospitality HR Management (3)
Studies the technical and legal challenges of hospitality human resource management from working within today's employment laws to controlling absenteeism, dealing with unions, handling discipline and termination, and creating affordable wages and benefit programs. Explores controlling costs, increasing motivation and productivity, and how to find and keep good employees .

HOS 2080 - Internship (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.

HOS 2089 - Work Experience (2)
A demonstrated culmination of learning within a given program of study.

HPR - Health Professional

HPR 1006 - 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.

HPR 1007 - Computers in Healthcare (2)
Introduces basic computer technology, file management, and PC system components as used in Health Care settings. Provides an overview of word processing, spreadsheets, and personal information management software. Introduces the Electronic Health Record (EHR), its content, EHR software, EHR management, patient management and scheduling, and privacy and security of the EHR.

HPR 1008 - Law & Ethics for Health Professions (2)
Introduces student to the study and application medico-legal concepts in medical careers. This course seeks to establish a foundation for ethical behavior and decision making in health professions.

HPR 1010 - Dietary Nutrition (1)
Studies the basic nutritional principles in clinical practice in 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 disease states.

HPR 1011 - CPR for Professionals (0.5)
Meets the requirement for American Red Cross Professional Rescuer CPR or American Heart Association Basic Life Support for those who work in Emergency Services, Health Care and other professional areas. Material presented in the course is basic patient assessment, basic airway management, rescue breathing, and CPR for infant, children and adult patients.

HPR 1017 - Anatomical Kinesiology (3)
Studies the anatomical basis of human movement.

HPR 1020 - Phlebotomy (4)
Covers the duties associated with the practice of venipuncture, capillary puncture, and special collection procedures. This course provides experience with quality control, infection control, safety procedures, as well as laboratory computer systems. Successful completion of this course, with an adequate number of blood draws, will constitute eligibility for application for a National Phlebotomy Registry Examination.

HPR 1032 - Disease Process and Treatment (5)
Covers disease processes and drug therapy used to treat commonly found pathological conditions. Normal anatomy and physiology of each body system is reviewed. Conditions that disrupt homeostasis are examined. Conditions considered are both acquired and congenital. Diagnostic methods, management, treatment modalities and prognosis are discussed. Classifications of drugs are introduced. A general understanding of the actions; absorption, metabolism and excretion; and reasons for use of various groups of pharmacologic agents are introduced.

HPR 1036 - 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.

HPR 1038 - Intro to Medical Terminology (1)
Introduces the structure of medical terms with emphasis on using and combining the most common prefixes, roots, and suffixes. This course includes terms related to major body systems and provides accepted pronunciation of terms.

HPR 1045 - Medical Record Terminology (2)
Demonstrates knowledge of medical terminology with emphasis on combining complex prefixes, roots and suffixes. Course includes pathophysiology for major body systems. Course includes terms related to diagnostic tools per body systems, as well as commonly used medical abbreviations. Course applies medical terminology knowledge in interpreting the medical record.

HPR 1050 - 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.

HPR 2025 - Phlebotomy Refresher (1)
Covers OSHA regulations, collection procedures, and requirements for various laboratory tests, phlebotomy technique, problem solving, legal implications, and rights of the phlebotomist and patient.

HPR 2050 - Advanced ECG Interpretations (2)
Focuses on each wave and interval of the complex, the axis, and the 12-lead presentation of some rhythm disturbances.

HPR 2089 - Capstone (1)
Facilitates transition from student to graduate through a comprehensive application of knowledge by preparing students to take their national certification exam as required by industry for employment.

HUM - Humanities

HUM 1003 - Intro to Film Art: GT-AH2 (3)
Introduces film terminology and narrative techniques to explore how film conveys meaning and to study the relationships among film form, content, and audience reception. This course emphasizes active viewing, discussion, and critical analysis of films from different cultures and eras. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: (GT-AH2).

HUM 1015 - World Mythology: GT-AH2 (3)
Introduces an interdisciplinary approach to world mythology. The course illustrates and connects common themes in mythology to world religion, philosophy, art, literature, music, and contemporary culture using various interpretive methods. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

HUM 1016 - Innovation & Design Thinking (3)
Develops higher order convergent and divergent thinking skills. Through the exploration of innovation and Design Thinking in different and cultural contexts, students will apply these thinking skills to a variety of academic disciplines, contemporary issues and life experiences.

HUM 1020 - History of Rock & Roll (3)
Teaches students to read about, write about, and discuss the social history of that very broad term "rock and roll". We explore important themes in American (and British) social and cultural history through the study of popular music, as well as to examine how popular and critical tastes are reflections of artistic, cultural, sexual, economic and ideological sensibilities at the time of its production. In order to fully understand what the culture of "rock" is all about, we critically analyze the influence of technology, ideology, class, gender, and race on various genres of music: jazz, country, rhythm and blues, techno, heavy metal, and hip hop. We also examine how rock and roll influenced (and is influenced by) other arts, particularly literature and film. Emphasis is placed on understanding the social and cultural contexts of the various music forms rather than on a rigorous understanding of the musical forms themselves.

HUM 1021 - Humanities: Early Civilization: GT-AH2 (3)
Introduces the interdisciplinary study of ideas that have defined cultures through a survey of the visual, performing, and literary arts, emphasizing connections among diverse cultures, including European and non-European, from the prehistoric to the early medieval era. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

HUM 1022 - Humanities: Medieval-Modern: GT-AH2 (3)
Introduces the interdisciplinary study of ideas that have defined cultures through a survey of the visual, performing, and literary arts, emphasizing connections among global cultures from the medieval to the early modern era. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

HUM 1023 - Humanities: Modern World: GT-AH2 (3)
Introduces the interdisciplinary study of ideas that have defined cultures through a survey of the visual, performing, and literary arts, emphasizing connections among global cultures from the European Enlightenment to the postmodern era. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

HUM 1031 - The Arts & Cultures of Mexico (3)
Introduces students, through visual arts, music, and literature to attitudes toward the sacred and toward power (political, economic, social, religious) held by various cultures in Mexico from the Pre-Hispanic era to the mid-twentieth century.

HUM 1064 - 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.

HUM 2011 - Cultural Diversity-Humanities (3)
Introduces students to the various aspects of social and cultural diversity. Promotes development of critical thought and growth of multicultural, multi-social and multilingual understanding.

HVA-Heating Ventilation and Air Conditioning

HVA 1001 - Intro to Air Conditioning & 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.

HVA 1002 - Basic Refrigeration (4)
Introduces the basic theory of refrigeration systems, components, charging, recycling, and evacuation of refrigeration units.

Prerequisite: Prerequisite/Corequisite: HVA 1001. This course and HVA 1001 may be taken at the same time.

HVA 1003 - 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.

HVA 1004 - Electrical Components (4)
Covers electrical power, distribution, transformers, capacitors, relays, and electric motors. Laboratory experiences consist of using electrical devices to control electrical loads.

Prerequisite: HVA 1003. This course and HVA 1003 may be taken at the same time.

HVA 1022 - Commercial Refrigeration (4)
Covers commercial icemakers, walk-in coolers, walk-in freezers, and self-contained refrigeration units.

Prerequisite: HVA 1001, HVA 1002, HVA 1003, and HVA 1004.

HVA 1023 - Air Conditioning (4)
Covers basic heating and air conditioning theory and service. Aspects covered include gas heat, electric heat, heat pumps, residential boiler systems, central air conditioning, and window air conditioners.

Prerequisite: HVA 1001, HVA 1002, HVA 1003, and HVA 1004.

HVA 1024 - Advanced Air Conditioning (4)
Covers design, installation, and testing of residential heating and cooling systems. Additional areas emphasized are duct design and sheet metal work.

Prerequisite: HVA 1001 and HVA 1002 and HVA 1003 and HVA 1004, and prerequisite or corequisite: HVA 1023.

HVA 2000 - International Residential Code (2)
Covers the mechanical and fuel gas requirements of the International Residential Code. Students will be given the opportunity to learn and apply the general requirements of this code. The course will review and apply the sizing requirements of parts V and V1 of this code.

Prerequisite: HVA 1001, HVA 1002, HVA 1003, and HVA 1004.

HVA 2001 - Heating for Commercial (3)
Covers hydronic and steam heating systems, including steam, hot water and forced air-heating systems for commercial buildings.

Prerequisite: HVA 1001, HVA 1002, HVA 1003, and HVA 1004.

HVA 2002 - Troubleshooting & Customer Service (3)
Covers field analysis of malfunctions on actual, in-house, heating, ventilation, refrigeration and air conditioning equipment. Customer interaction and diagnosis efficiency is stressed.

Prerequisite: HVA 1001, HVA 1002, HVA 1003, and HVA 1004.

HVA 2003 - Industrial Controls (3)
Covers both pneumatic and electrical/electronic control systems. Students learn installation, maintenance and calibration of controls. Laboratory experiences include troubleshooting of malfunctioning systems, calibration and typical installation of control systems.

Prerequisite: HVA 1001, HVA 1002, HVA 1003, and HVA 1004.

HVA 2035 - Specialty Refrigeration Units (4)
Covers the advanced study of refrigeration equipment such as cascade refrigeration units, and two stage refrigeration units.

Prerequisite: MAC 1001 and MTE 2320.

HVA 2047 - Hot Water Heating Systems (4)
Covers the theory of operation behind these systems, as well as installation, maintenance and repair. The course also examines air elimination, circulator pump and pipe sizing. Boiler and heat convector sizing are also discussed.

Prerequisite: HVA 1001, HVA 1002, HVA 1003, and HVA 1004.

HVA 2080 - Internship (2)
Gives the students an opportunity to apply their course studies in a specific area.

Prerequisite: HVA 1002 and HVA 1004.

HVA 2089 - Capstone (2)
Demonstrates culmination of learning within a given program of study.

HWE - Health Wellness Education

HWE 1001 - Community First Aid and CPR (1)
Prepares the student for certification in CPR and Basic First Aid. Skills will include basic life support, airway obstruction, control of bleeding, shock, and patient care for the unconscious.

HWE 1050 - Human Nutrition (3)
Introduces basic principles of nutrition with emphasis on personal nutrition. This course focuses on macro and micro nutrients and their effects on the functions of the human body. Special emphasis is placed on the application of wellness, disease, and lifespan as it pertains to nutrition.

HWE 1051 - Nutrition of Pregnancy (1)
Examines the basic nutrition principles during pregnancy and lactation. Emphasis will be placed on normal pregnancy, gestational diabetes, normal lactation, and common problems in breastfeeding.

HWE 1052 - Infant Nutrition (1)
Examines the basic nutrition principles for infants and toddlers from birth to 18 months of age.

HWE 1053 - 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".

HWE 1055 - Lifecycle Nutrition (3)
Examines the nutritional needs of humans as they move through the life cycle stages from pre-conception through older adult years.

HWE 1060 - Weight Loss (1)
Focuses on calories in relationship to body weight and proper dietary behaviors that encourage weight loss.

HWE 1061 - Fitness and Wellness (2)
Provides information on fitness and wellness and serves as a guide to design, implement, and evaluate a complete personal fitness and wellness program.

HWE 1063 - Fitness Conditioning & 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.

HWE 1064 - Weight Management & Exercise (2)
Offers guided instruction in weight management. Emphasis is placed on the development of weight management programs and the role of exercise in maintaining weight loss.

HWE 1065 - Intro to Exercise Health Sciences (3)
Introduces the discipline of kinesiology, including the effects of physical activity and exercise on the human physiology and human experience. The course also explores career options including expectations of professionals in the field.

HWE 1066 - Health & Wellness for the Elderly (3)
Focuses on the field of health and wellness for the elderly population. The foundations of health and wellness will be explored as well as the skills and resources needed to assist the elderly in being more proactive in their healthcare practices.

HWE 1068 - Certified Personal Trainer Prep Course (3)
Provides knowledge and skills to prepare for a nationally recognized personal training certification. The course includes the development and implementation of exercise programs for healthy populations, and for individuals with medical clearance to exercise.

HWE 2060 - Exercise, Nutrition & Body Composition (3)
Focuses on the concepts of improved performance in all fitness areas. Emphasis is placed on how carbohydrates, fat, and protein impact performance, and the relationship between metabolism and weight for all populations. Addresses unhealthy diets, eating patterns, and behavior modifications to change negative food relationships within a variety of populations.

HWY - Highway Maintenance Management

HWY 1000 - Highway Maintenance & Operations Safety (1)
Introduces performance of highway maintenance and operations work activities emphasizing safety and establishing a safety-focused work culture.

HWY 1001 - Highway Maintenance Management (3)
Introduces highway maintenance and operations job activities within state, county, city, and municipal public works (road and bridge) agencies. This course explores career opportunities in highway maintenance and assessments of fit to career interests.

HWY 1005 - Traffic Control (2)
Introduces design, set up, and maintenance of temporary traffic control in a highway maintenance work zone.

HWY 1010 - Highway Asset Management (1)
Introduces the strategic approach to managing and prioritizing the use of highway assets (e.g., equipment, materials, staffing) to best achieve targeted roadway and bridge performance levels given existing asset conditions and available funding. This course instructs how to use reliable data and clear performance metrics to support trade-off decision making on the most effective use of assets to advance agency objectives.

HWY 1015 - Pavement Preservation (2)
Introduces concepts, techniques, and treatments to extend the life of asphalt pavements.

HWY 1080 - Internship I (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 1081 - Internship II (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 1082 - Internship III (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 1083 - Internship IV (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 1084 - Internship V (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 2010 - Gravel Road Maintenance (2)
Introduces the management of unimproved, gravel, and low volume roads. Instructs on the best maintenance and rehabilitation practices of gravel roads within available agency budgets.

HWY 2055 - Highway Maintenance Leadership (4)
Introduces leading a highway maintenance organization and managing highway maintenance and operations activities. This course covers the integrated technical and non-technical/managerial roles and responsibilities of a highway maintenance manager.

HWY 2080 - Internship VI (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 2081 - Internship VII (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 2082 - Internship VIII (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 2083 - Internship IX (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 2084 - Internship X (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HWY 2088 - Practicum (2)
Provides students an opportunity to gain practical experience in applying their skills and/or to develop specific skills in a practical work setting. The instructor will work with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the practicum supervisor.

HWY 2089 - Capstone (2)
Provides a demonstrated culmination of learning within a given program of study.

IHP - Integrative Health Professions

IHP 1001 - Intro to Integrative Health (2)
Introduces the spectrum of diverse health practices found within the emergence of the Integrative Health field. The course explores the history, theoretical foundations, and common treatment modalities categorized under the five primary domains of Complementary Alternative Medicine (CAM). This course also provides an overview of the Integrative Health Professions Program and tools for success.

IHP 1004 - Exploring Dream Interpretation (1)
Introduces the purpose and theories of dreaming and explores the potential benefits of dream interpretation as a tool for facilitating health and personal growth. This course discusses simple techniques for dream recall, recording dreams, and methods to interpret the unconscious meanings of dreams.

IHP 1006 - Enhancing Personal Empowerment (1)
Describes how self-talk, self-worth, and personal beliefs impact one's self-esteem and reactions to stress and life experiences. The course reviews various personal development theories and New Thought philosophies on the power and influence of positive thinking. Specific techniques, tools, and protocols for developing an empowerment plan to help increase self-esteem, confidence, and positive personal and professional growth are presented in this course.

IHP 1007 - Stress Management for Health (1)
Explores various types and causes of stress and seeks to identify specific skills to healthily manage personal, academic and professional stress in order to reach one's full potential. Breathing and relaxation techniques are emphasized. This course discusses healthy coping methods to reduce stress and improve concentration. The course will emphasize evaluation of communication skills and thinking patterns in order to create healthier lifestyles.

IHP 1008 - Journaling Towards Wellness (1)
Describes journaling as an effective tool for introspection on personal growth and for developing a path towards wellness for oneself and as a practitioner with a client. This course introduces various journaling techniques and connects their use to various health-related and coaching practices that serve to promote insight into a more balanced state of well-being.

IHP 1009 - The Human-Animal Bond (1)
Introduces and explores the history and current therapeutic applications of the human-animal bond. This course focuses on theories, research, and experiential testimony regarding the health benefits and traits of pet ownership, animals in public places, animal-assisted activity, and animal assisted therapy. This course reviews the impact of death on both animals and humans and identifies community services that assist with such loss.

IHP 1011 - Intro to Massage Techniques I (1)
Provides a general history of massage therapy up to modern day. An emphasis on the physiological as well as psychological impact of massage therapy on overall health, injury restoration, and illness prevention will be covered. Provides a basic overview of musculoskeletal anatomy as it relates to massage therapy and will include demonstrations of specific hands-on techniques required to complete a full body Swedish massage.

IHP 1012 - Intro to Massage Techniques II (1)
Reviews Swedish massage techniques. This course covers advanced application of technique, communication skills, and environmental adaptations necessary to work with special populations. Special populations are defined here as infants, children, pregnant women, older adults, obese, athletes, and terminally ill.

IHP 1014 - A & P Integrative Therapies (4)
Provides a general knowledge of anatomy and physiology of the major body systems with additional focus given to the identification and functions of the muscular and skeletal systems as they pertain to integrative therapies. This course is specifically designed for individuals specializing in integrative health trainings with direct application, relevant pathologies, and potential treatment connected to holistic therapies including massage, reflexology, energy work, aromatherapy, and yoga.

IHP 1015 - Intro to Reflexology (1)
Provides an introductory overview of Reflexology as practiced within the United States. The course will review the history of Reflexology as well as modern day acupressure application techniques to reduce stress. This course provides connections between basic foot anatomy and meridian zone maps in their identification of reflex points on the feet as they relate to organ systems throughout the body.

IHP 1016 - Reflexology of Hands & Feet (3)
Provides extended foot and hand anatomy instruction to further assess the physiological and psychological responses of the body to alleviate stress/pain using energy and touch. This course presents advanced protocols of Reflexology and application of more sophisticated techniques on the hands and feet. It covers the application of self-care and reviews the scope of practice emphasizing the necessary recording procedures and proper documentation.

Prerequisite: Prerequisite/Corequisite: This course and IHP 1015 may be taken at the same time.

IHP 1017 - Meridian Acupoint Tapping (2)
Applies elements of cognitive therapy, exposure therapy, and memory reconsolidation with Traditional Chinese Acupressure in the form of light fingertip tapping on meridian end-points for self-application and for application with others. This course teaches Tapping protocols for identification, assessment, balancing and clearing of blockages in the body energy system, and examines the impact of cognitive beliefs caused by stressful events and other adverse life conditions in health and wellness.

IHP 1018 - Acupressure Techniques (1)
Focuses on acupressure, a form of bodywork involving pressure with palms, forearms, elbows, and fingers along the meridians used in traditional Chinese acupuncture. The course will emphasize hands-on instruction to demonstrate how to energize, balance, and ease common aches and discomforts in order to promote wellness and enhance the skill-set of massage therapists and other body workers.

Prerequisite: Prerequisite/Corequisite: This course and IHP 1011 may be taken at the same time.

IHP 1020 - Reiki Level I (1)
Examines the history and development of the energy modality of Reiki. The course will explain the basic concept of 'Qi,' how it works, and its impacts on all facets of health. Specific skills training and demonstrations of Reiki energy will be provided to conduct hands-on energy sessions on oneself as well as on others for the purpose of clearing and balancing energy to benefit health.

IHP 1021 - Reiki Level II (1)
Demonstrates advanced Reiki energy healing techniques and further prepares students for the role of a professional practitioner. Advanced content describing the additional Usui Reiki symbols, their meanings, and their various applications will be explained. This course will describe advanced techniques and provide demonstrations and hands-on practice giving full Reiki treatment sessions as well as long-distance sessions. Further discussion of ethics and creating a professional healing space will be included.

Prerequisite: Prerequisite/Corequisite: This course and IHP 1020 may be taken at the same time.

IHP 1022 - Reiki Level III Master Teacher (1)
Provides the necessary training, visual demonstrations, and hands-on practicing of mastery level techniques that will further enhance the ability to channel Reiki energy for healing purposes. This course will expand the use of Usui Reiki symbols, explain the master symbols, and advanced mastery level techniques to perform Reiki attunements and become teachers of Reiki.

Prerequisite: Prerequisite/Corequisite: This course and IHP 1021 may be taken at the same time.

IHP 1024 - Health Apps of Crystals (1)
Introduces the historical and modern-day theories and perspectives on the energetic healing properties contained within crystals and minerals. Methods to clear, charge, cleanse, and utilize crystals and minerals will be reviewed. The course will discuss the specific properties of crystals/minerals and their use in conjunction with other energetic healing modalities to enhance overall health.

IHP 1030 - Intro to Aromatherapy (1)
Provides an introductory level of information about the historical origins, safety precautions as well as various applications and uses of essential oils to reduce stress, aid in relaxation, and benefit health. Emphasis will be placed on various types and properties of common essential oils and how to safely use them as supplements to other holistic treatment modalities.

IHP 1035 - Intro to Herbalism (1)
Explores the philosophy, ethics, and applications of Herbalism. It introduces pharmacokinetics and composition of herbs and their effects on bodily systems. The course will focus on the habitat, means of harvesting, storing, processing, and usage of a select group of herbs. The course will provide step-by-step guidance to safe creation of herbal products, and it will teach how to access quality sources of information.

IHP 1041 - Growing & Preserving Organic Foods (1)
Introduces the information and skills needed to grow and preserve organic herbs and food for personal use. This course discusses various techniques and space considerations for organic gardening. Course content will include soil health, microgreens, pollination, hydroponics, seed saving, methods of preserving food and community resources for enhancing knowledge of gardening as well as for sharing information and products.

IHP 1055 - Introduction to Qigong (2)
Provides an overview of the history of Traditional Chinese Medicine (TCM). It teaches the application of Qigong that integrates physical postures, breath work, and mental focus to aid in the healing of various physiological, emotional, and psychological health conditions. This course teaches soft exercise postures and supplemental modalities to tap into one's universal energy source to calm the mind, focus one's intention and reduce stress; while also healing the body.

IHP 1058 - Intro to Health & Wellness Coaching (1)
Describes the introductory knowledge and tools for basic coaching skills. This course will offer instruction for performing assessment, goal-setting techniques, and the essential positive communication procedures utilized between coach and client. The information, skills and professional protocols necessary to help facilitate and motivate others in the movement towards lifestyle and behavioral changes will be provided within the context of becoming an effective health and wellness coach.

IHP 1061 - Intro to Homeopathy (1)
Introduces the history and development of Homeopathy. It will explore the guiding principles and rules for using homeopathic remedies as well as how they work to activate immune response and promote detoxification. The content will review past successes, current research studies, and scientific theories that explain how and why homeopathic remedies work in treating modern ailments.

IHP 1062 - Exploring the Sacred Wild (1)
Examines the Gaia Theory/Hypothesis as well as familiarizes students with the essence of reconnecting with the inner and outer landscapes of the Sacred Wild. This course explores the field of Ecopsychology and investigates the deep primordial connection between human beings, the natural world, and our impact on the Earth (Gaia).

IHP 1088 - Practicum (1)
Provides students an opportunity to gain practical experience in applying their educational skills and/or to develop specific skills in a practical work setting. The instructor will work with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the practicum supervisor.

IHP 2000 - Creating Healing Presence (1)
Applies the mind-body-spirit connection to understand the meaning of "presence," as being the quality of a holistic self-giving exchange during the healing or dying process. The course describes how enhanced self-awareness, personal discovery, and the quality of "presence" can significantly influence patient healing responses to illness or trauma. This course examines specialized techniques for profoundly connecting with others and creating a sacred space during the healing continuum and throughout the dying process.

IHP 2001 - Integrative Health Keystone (3)
Provides a comprehensive foundation to the philosophy, theory, and practice of Holism in the emerging field of Integrative Health/Medicine. This course offers an inclusive summary of modalities under the identified domains of Complimentary Alternative Medicine (CAM) that are used to treat and prevent illness, facilitate healing, and sustain/regain optimal health. Research related to the body-mind-spirit response and the importance of self-care, using intuition, and the practitioner-client relationship will be reviewed.

Prerequisite: Prerequisite/Corequisite: ENG 0090 or ENG 0093 or ENG 0094 or ENG 1021 or higher. These ENG courses may be taken with this course at the same time.

IHP 2003 - The Role of Art in Healing (1)
Recognizes the role of visual art in healing that includes both didactic information and experiential learning. The course examines how the role of art in healing has evolved over the years and explores different models, approaches, and focuses of healing through visual art.

IHP 2004 - Ethics in Integrative Health (2)
Examines the ethical issues associated with the practice of integrative health therapies with emphasis on the significance of boundaries, creating safe working environments, and maintaining a healing presence. This course addresses self-care,

professional codes of ethics, confidentiality, scopes of practice within various treatment modalities as well as safe and appropriate touch. An examination of the psychological and physical dynamics of professional practitioner-client relationships as well as tools for effective communication will be discussed.

IHP 2005 - Integrative Health Business Practices (2)
Describes the necessary components for creating professional career goals in becoming an integrative health professional practitioner. Content will examine the necessary skills and steps to become a small business entrepreneur or a professional practitioner entering existing practices/organizations. This course provides instruction for developing individualized business plans or professional portfolios as well as reviews the benefits of joining professional organizations.

Prerequisite: ENG 0090 or higher OR. Corequisite: ENG 1021. This course and ENG 1021 may be taken at the same time.

IHP 2009 - Exploring Holistic Animal Care (3)
Introduces contemporary views about providing holistic animal care and safe application of various homeopathic, energetic, and natural remedies with pets/animals. The course will discuss communication techniques and how to provide animals with healthier nutrition, nontoxic toys, and safe environments to optimize their overall wellness. Students will examine diverse views regarding the treatment of animals from past to present, the grief process, and new applications of holistic veterinary training and animal care.

IHP 2015 - Advanced Reflexology (2)
Discusses advanced anatomy of the hands and feet and connects to advanced reflexology techniques to address specific health issues. It focuses on enhancing the skill of learning-enhanced reflexology protocols as well as anatomy and reflexology of the ear. This course synthesizes information from previous courses in order to conduct advanced practice sessions, engage in discussions on professional practitioner ethics, and prepare for the reflexology clinical experience.

Prerequisite: IHP 1016.

IHP 2020 - Healing Touch Level I (1)
Provides experiential training that encourages personal reflection in regards to the use of energy and touch to facilitate healing responses in others. This course will provide the step-by-step process using the energy modality of Healing Touch (HT) in mastering energetic touch intervention techniques that can be utilized to support health and to facilitate the healing process.

IHP 2021 - Healing Touch Level II (1)
Focuses on advanced knowledge and skills training in the techniques necessary to conduct a full one-hour healing sequence. Protocols for initial intake interviews, choosing appropriate energetic flow techniques, and using proper session documentation will be introduced. This course enhances the knowledge required to conduct an energetic health history interview and to conduct several advanced specialized Healing Touch (HT) techniques.

Prerequisite: Prerequisite/Corequisite: IHP 2020. This course and IHP 2020 may be taken at the same time.

IHP 2022 - Healing Touch Level III (1)
Explores advanced topics in the art of being an energy healer and what is necessary to transform a basic level practice into a professional practice by utilizing more expansive energetic flows and techniques. The course will provide information to deepen the understanding of the human energy field and how it manifests within physical, emotional, mental, and spiritual bodies. The importance of self-care and implementing pre-session practices for the Healing Touch (HT) practitioner's professional well-being will be reviewed.

Prerequisite: Prerequisite/Corequisite: IHP 2021. This course and IHP 2021 may be taken at the same time.

IHP 2024 - Jin Shin Level I (2)
Examines the Jin Shin energy modality that is based upon ancient Chinese Acupuncture. Instruction will be provided on pulse readings and corresponding touch points to access the body's meridians by the use of flows to remove energy blockages through twenty-six safety energy locks. The course will explore a greater understanding of the mind-body connection using this modality to promote mental-emotional-physical balance as a practitioner.

IHP 2025 - Jin Shin Level II (2)
Expands upon the knowledge and techniques of the Jin Shin energy modality. The course will advance kinesthetic skills by going more in depth about the mind-body connection of each of the twenty-six safety energy locks. The course will provide greater focus on the mental-emotional aspects of energy work. It will cover advanced proficiency in the ability to take and interpret pulses and in performing full energy sessions of Jin Shin.

Prerequisite: Prerequisite/Corequisite: IHP 2024. This course and IHP 2024 may be taken at the same time.

IHP 2027 - Bach Flower Essences (2)
Examines the history, creation, and purpose of Bach Flower Essences. An exploration of how stress and emotions affect the physical body will be introduced. A viable connection will be made between energy medicine theories to reducing stress and their corresponding negative emotions. The course will discuss the purpose and relevant application of all thirty-eight Bach Flower Remedies, proper blending, and storage techniques as well as their use in restoring emotional balance for wellness.

IHP 2030 - Applied Aromatherapy (3)
Explains the historical and cultural uses of aromatherapy/essential oils and the distillation process through present day. This course addresses basic Botany and examines how essential oils interact with human physiology. The course will review modern research/clinical studies addressing the efficacy of essential oils as well as creating therapeutic blends. The course will examine the safety, contraindications, and practice of using essential oils as well as the ethics and scope of practice of an aromatherapist.

IHP 2031 - Advanced Aromatherapy (4)
Incorporates and expands upon the knowledge of aromatherapy to prepare for careers utilizing essential oils as a healing modality. The course provides advance techniques in safely using essential oils in therapeutic manner or as a complement to other treatment practices. Content will include reviewing profiles of essential oils, refining the consulting process with clients,

performing intake interviews, recommending appropriate essential oils/blends and advising others on how to safely use and properly apply oils/blends.

Prerequisite: IHP 2030.

IHP 2035 - Applied Herbalism (2)
Applies introductory knowledge to explore the advanced usage of plants and herbs, plant-based remedies as well as a greater understanding of pharmacokinetics and body systems. The creation of safe herbal products will be conducted while also exploring the spiritual and intuitive side of practicing herbalism. Emphasis will be placed on plant identification, selection, and the ethical utilization of herbalism.

Prerequisite: Prerequisite/Corequisite: This course and IHP 1035 may be taken at the same time.

IHP 2040 - Holistic Nutrition: Digestive Wellness (3)
Examines the concept of the gut as the "second brain" and the importance of digestive health as a major determinant of overall wellness. The course describes different digestive imbalances, gut flora healing protocols, and how the use of natural therapies to treat digestive disorders can impact overall health. The course will review current research on digestion and evaluate controversial topics in nutrition.

IHP 2050 - RYT 200 Yoga Teacher Training (10)
Provides training in applicable anatomy, educational and physical requirements, and specific kinesthetic techniques necessary to become a professional Hatha Yoga (RYT200) instructor. This course describes the history, philosophy, and practice of Yoga and its multi-faceted impact on health. Special training is given to provide modifications for those with various health-related conditions or limitations. Content will focus on lesson plans preparation, protocol and skill development, and the ethical practices in becoming a registered yoga instructor.

IHP 2051 - Advanced Yoga Institute (5)
Advances the understanding and experience of Hatha Yoga by building upon and deepening the proficiencies taught in RYT200 (Registered Yoga Teacher) level courses. The course provides preparation for teaching more sophisticated principles and techniques of yoga. It will cover advanced skills in yoga posture techniques, methodology, anatomy, philosophy, and practical applications. It applies higher RYT instruction that includes addressing needs of special populations, specialized accommodations, yoga for wellness, and alignment to other integrative health topics.

Prerequisite: IHP 2050.

IHP 2052 - Mindfulness for Health & Wellness (2)
Examines the mental, emotional, spiritual, and physiological impact of mindfulness and meditation techniques on the brain, bodily systems and on overall stress reduction. This course explores the historical and cultural evolution of mindfulness techniques and investigates the overall health benefits of various breathing and meditation practices in promoting wellness. Content will promote experiential mindfulness exercises and information on diverse meditation tools for individual practice development and for teaching to others.

IHP 2058 - Advanced Health Wellness Coaching (3)
Provides training in the use of advanced coaching skills necessary to become Health and Wellness Coaches. This course will provide instruction and demonstrations on the systematic coaching process based on behavioral change, positive psychology, human motivation, health promotion, and the professional coaching competencies. The content will focus on the advanced coaching protocols necessary to support and motivate future clients to make lasting behavioral changes in order to create healthier lifestyles and sustain overall wellness.

Prerequisite: Prerequisite/Corequisite: This course and IHP 1058 may be taken at the same time.

IHP 2059 - Specialized Coaching Techniques (2)
Identifies advanced skills and specified techniques required to assist future coaching clients with fitness goals. This course will apply previously learned coaching practices to the fitness world when working with clients possessing various health conditions and diverse physical abilities. The course will provide specific knowledge, safety standards, and corresponding specialized techniques on how to support and motivate clients who desire to make lasting behavioral and lifestyle changes to achieve optimal health using fitness.

Prerequisite: IHP 2058.

IHP 2060 - PNI: Exploring Mind-Body Connection (3)
Examines the evolving theory of Psychoneuroimmunology (PNI). Content will focus on the impact of stress and the views of body-mind connection on health. This course will describe the physiological and psychological interrelationship between the central nervous system, the immune system, and the endocrine system, and their combined impact on illness and wellness. The course will review conventional healthcare concepts and introduce contemporary integrative theories that are influencing health education, medical training, and health careers.

Prerequisite: Prerequisite/Corequisite: IHP 2001. This course and IHP 2001 may be taken at the same time.

IHP 2061 - Traditional Chinese Medicine (3)
Introduces the history, theories, principles, and various modalities in the practice of Traditional Chinese Medicine (TCM). This course will discuss the TCM approach to treating pain, illness, and disease using acupuncture, herbalism, massage, nutrition, cupping, meditation, and martial arts. Using a review of ancient materials and current research, this course will examine how TCM views, diagnoses, and treats disease. This course will describe the education and training required for various careers using TCM.

IHP 2062 - Lifestyle Medicine Foundations (3)
Introduces the foundational principles of Lifestyle Medicine and evidence supporting lifestyle-based treatment approaches. This course will explore the dimensions of a healthy lifestyle from a whole-person perspective and examine how the theories and findings from various fields of behavior differ. It discusses how Positive Psychology can be applied to optimize well-being. Course content will examine the roles, resources, and professional careers of health/wellness coaches and other integrative health professionals utilizing the ideologies of Lifestyle Medicine.

IHP 2063 - Intro to Ayurveda Medicine (3)
Introduces Ayurvedic medicine as the ancient healing system of India, based upon the premise that when the body, mind, and spirit are in balance, there is no opportunity for disease. With an emphasis on nutrition, herbalism, yoga, and massage, this course

reviews the history, theoretical philosophies, and fundamental principles of Ayurveda. This course will provide a foundation for further study and career opportunities using Ayurveda and how it integrates with other health treatment modalities.

IHP 2070 - Reflexology Clinical (2)
Offers the clinical practicum required for the Reflexology program.

Prerequisite: Prerequisite/Corequisite: IHP 2015 (can enroll same term).

IHP 2071 - Aromatherapy Clinical (2)
Offers the clinical practicum required for the Aromatherapy program.

Prerequisite: Prerequisite/Corequisite: IHP 2031 (can enroll same term).

IHP 2072 - Integrative Clinical - Coaching (1)
Offers the clinical practicum required for the Health and Wellness Coaching program.

Prerequisite: IHP 2058.

IHP 2073 - Integrative Health Clinical (1-4)
Continues to build upon the principles that are expected to be understood by students in a specified holistic/integrative health discipline.

IHP 2080 - Internship (1-4)
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.

IHP 2087 - Cooperative Education (1-4)
Provides a college-to-work based experience that draws on combined efforts of educators and employers to produce outcomes related to student career objectives.

IHP 2088 - Practicum (1-4)
Provides students an opportunity to gain practical experience in applying their educational skills and/or to develop specific skills in a practical work setting. The instructor will work with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the practicum supervisor.

IHP 2089 - Integrative Health Capstone (2)
Provides a demonstrated culmination of learning within a given program of study.

Prerequisite: IHP 2001.

IMA - Industrial Maintenance Technology

IMA 1500 - Industrial Rotating Equipment (3)
Explains the theory, operation, and maintenance of rotating equipment found in industrial environments such as gears, bearings, pumps, and compressors. Mechanical power transmission systems including direct coupling, belt drives, and chain drives are studied. Alignment techniques are practiced and related to the impact on machine vibration and equipment failures. The principals involved in the operation of centrifugal and positive displacement pumps and compressors will be discussed along with the function of connected components.

Prerequisite: Prerequisite/Corequisite: MTE 1102.

IND - Interior Architecture & Design

IND 1078 - Seminar (1)
This course provides students with an experiential learning opportunity.

IND 1088 - Practicum (1)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

IND 1101 - Introduction to Interior Design (3)
Introduces the design process, fundamental skills, principles and theories related to the interior environment. The course will have a focus on spatial awareness, color, environmental issues and the elements of design while having the student become familiar with the creative process and establishing a basic understanding for design aesthetics. The course provides a foundation for future coursework.

IND 1102 - History of Interior Design (3)
Offers a study of interiors and furnishings from the medieval period to the Revival styles of the mid-eighteenth century to the contemporary classics used in modern interiors today. The course provides study of interior and exterior architectural elements, furniture, design motifs and ornamentation, fine arts and construction methods as it relates to the cultural, political, social, technological and economic conditions of the times.

IND 1103 - Communication in Design (1)
Develops communication techniques a new hire needs in a design business setting. Covers skills promoting team building, effective verbal and written communication in the workplace, conflict resolution strategies and budgeting.

IND 2078 - Workshop (4)
Provide students with an experiential learning opportunity.

Prerequisite: IND 2207.

IND 2080 - Internship (4)
Provides work experience in a business or industry; 45 fieldwork hours per credit hour.

Prerequisite: IND 2501 or IND 2300.

IND 2088 - Practicum (3)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: IND 2207.

IND 2089 - Capstone (4)
Provides a demonstrated culmination of learning within a given program of study.

Prerequisite: IND 2088.

IND 2201 - Graphic Communication (4)
Teaches methods of communicating interior design plans, elements and ideas in 3-D, through perspective drawing construction and quick sketch techniques, and practice rendering and illustration skills.

IND 2203 - Space Planning (3)
Teaches the principles and factors of space planning and practices the space planning process through residential and light commercial applications. Students are introduced to

interior architecture, human factors, code requirements and functional space. Use of bubble diagrams, two and three dimensional design fundamentals and freehand ink presentation techniques are also included to communicate design solutions.

Prerequisite: IND 1100 and IND 2200 or. Corequisite: AEC 1200.

IND 2204 - Estimating Interior Materials (3)
Develops skills when estimating materials and costs for interior finishes including paint, carpet, wallcovering, and fabrics. Emphasis is on specification, documentation, and details.

Prerequisite: IND 2207.

IND 2207 - Interior Design II (3)
Develop awareness of human dimensions, spatial organization and the importance of physical and psychological characteristics of people. Ergonomics, building codes, ADA factors and universal design will be studied along with programming methods of gathering and organizing data for solving design problems and creating appropriate spatial relationships and furniture layouts for residential and commercial projects.

Prerequisite: IND 2203.

IND 2300 - Interior Construction (4)
Introduces the student to interior building systems and assemblies, construction documents and details, and codes applicable to interior architecture. Student will apply this knowledge to various graphic projects and is encouraged to produce projects using the computer and CAD software.

Prerequisite: CAD 2220.

IND 2302 - 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 focusing on both residential and commercial interiors.

Prerequisite: CAD 2220.

IND 2501 - Kitchen and Bath Design (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 projects are produced. Students will be encouraged to produce project documents using a variety of computer software applications.

Prerequisite: IND 2200 or. Corequisite: IND 1101.

IND 2502 - Advanced Kitchen & Bath Design (4)
Continues Kitchen and Bath Design instruction while participating in the NKBA Student Design Competition for 1 bathroom and 1 kitchen remodel. Students will use NKBA Graphic Standards and Planning Guidelines to facilitate 2 sets of drawings, 2 materials boards, and 1 estimate and contract for the projects.

Prerequisite: IND 2501.

IND 2701 - Professional Practice for Interior Designers (2)
Introduces processes involved in creating and running a professional interior design business including legal, ethical, practical and professional requirements. There will be an emphasis on business structures and practices, professional documentation and contracts, marketing techniques, job cost estimating, setting up industry accounts and project management methods. Students become familiar with business practices in both commercial and residential design firms and develop business plans and resumes.

IND 2702 - IND Portfolio Presentations (3)
Prepare for the industry by refining presentation skills and completing a portfolio for employment. Students learn to manipulate software renderings, hand-drafted renderings, model building, interior finish presentation boards to develop a digital and hard-copy portfolio for selling design through presentation. The students will learn various techniques for time management and time-saving skills for graphic communication.

Prerequisite: IND 2078.

IND 2703 - Sustainable Design (3)
Creates an awareness and understanding of ecological issues while emphasizing the use of environmentally friendly materials and resources that do not compromise the effectiveness of the design. This course also investigates the practice of design to reduce the effects on the environment using renewable materials in the design and building for both residential and commercial property. Its emphases are to learn to conserve resources and to reduce the negative impact on the environment.

Corequisite: IND 2704.

IND 2704 - Interior Design IV (3)
Exposes students to various types of software used by major companies in the practice of interior design (course is divided into three sections to allow for this exposure). A project will be completed for each of the different software programs. Recommended basic skills standards are ENG 0060, MAT 0060, REA 0090, and STS 0060.

Prerequisite: IND 2300 or IND 2078.

IPP - Interpreter Prep Program

IPP 1021 - 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. In this course, the student is introduced to the code of ethics, situation assessment required for effective interpreting, and certification of interpreters.

IPP 1047 - Survey of Deaf Culture (3)
Surveys the factors that contribute to defining Deaf persons as members of a cultural minority. This course will look at the impact of language on the culture as well as the role of norms, values, traditions, and minority groups within Deaf culture. Attention will also be given to identity and membership in Deaf culture.

Prerequisite: ANT 1001. Corequisite: ASL 1123. This course and ASL 1123 may be taken at the same time.

ITA - Italian

ITA 1001 - 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.

ITA 1011 - Italian Language I (5)
Develops students' interpretive, interpersonal, and presentational communicative abilities in the language. Integrates these skills in the cultural contexts in which the language is used. Offers a foundation in the analysis of culture.

ITA 1012 - Italian Language II (5)
Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.

Prerequisite: ITA 1011 or appropriate placement score.

ITA 2001 - 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.

Prerequisite: ITA 1001.

ITA 2002 - 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.

Prerequisite: ITA 2001.

ITA 2011 - Italian Language III: GT-AH4 (3)
Continues Italian Language II in the development of increased functional proficiency at the intermediate level in speaking, aural comprehension, reading, writing, and cultural competency in the Italian language. This course is conducted predominantly in Italian. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: ITA 1012 or appropriate placement score. Offered: *(GT-AH4).

ITA 2012 - Italian Language IV: GT-AH4 (3)
Continues Italian Language III in the development of increased functional proficiency at intermediate mid-level in speaking, aural comprehension, reading, writing, and cultural competency in the Italian language. This course is conducted predominantly in Italian. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: ITA 2011 or appropriate placement score. Offered: *(GT-AH4).

JOU - Journalism

JOU 1005 - Intro to Mass Media: GT-SS3 (3)
Places the mass media in a technological, historical, and cultural perspective, considering the validity, integrity, and influence of the evolving media in a democracy. This course is a Statewide Guaranteed Transfer course in the GT-SS3 category.

Offered: *(GT-SS3).

JOU 1006 - Media News and Reporting (3)
Introduces newswriting, reporting and interviewing with an emphasis on clarity, accuracy, timeliness and fairness.

JOU 1021 - Photojournalism (3)
Develops photojournalistic skills in capturing moments of real life from a unique personal viewpoint. Covers a broad overview of new media story-telling techniques. Students will focus on the way they observe the world around them and on the content and quality of their photographs. Recommended course to take in advance: Digital Photography I.

JOU 2015 - Publications Production & Design (3)
Provides for student participation in the planning, writing, design and production processes of a non-newspaper publication.

JOU 2021 - Newspaper Design I (3)
Provides students with experience in news writing, editing, design, layout and advertising for newspaper production. Students may be required to work on the college newspaper or other news-oriented publication.

JOU 2025 - New Media (3)
Explores techniques and approaches in the latest delivery methods for new media journalism, ethics, technological advances, and media literacy.

JOU 2041 - Feature & Magazine Writing (3)
Focuses on trade, consumer, and technical publications, manuscript development with emphasis on nonfiction, submission techniques, and trends affecting the marketing of manuscripts both in print and digital media.

JPN - Japanese

JPN 1001 - 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.

JPN 1002 - Conversational Japanese II (3)
Continues the sequence for students who wish to understand and speak Japanese. Covers basic conversational patterns, expressions and grammar.

Prerequisite: JPN 1001.

JPN 1011 - Japanese Language I (5)
Introduces a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the Japanese language.

JPN 1012 - Japanese Language II (5)
Continues Foreign Language I in the development of functional proficiency in listening, speaking, reading and writing the Japanese language.

Prerequisite: JPN 1011.

JPN 2011 - Japanese Language III: GT-AH4 (3)
Continues the development of increased functional proficiency at the intermediate level in speaking, aural comprehension, reading, writing, and cultural competency in the Japanese language. This course is conducted predominantly in Japanese. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: JPN 1012. Offered: *(GT-AH4).

JPN 2012 - Japanese Language IV: GT-AH4 (3)
Continues the development of increased functional proficiency at intermediate mid-level in speaking, aural comprehension, reading, writing, and cultural competency in the Japanese language. This course is conducted predominantly in Japanese. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: JPN 2011. Offered: *(GT-AH4).

LEA - Law Enforcement Academy

LEA 1001 - Basic Police Academy I (6)
Conforms to POST standards and Colorado state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace officer. Emphasis will be on simulating actual situations utilizing both a lecture and laboratory mode of learning.

LEA 1002 - Basic Police Academy II (12)
Conforms to POST standards and state certification requirements as well as the basic skills and knowledge to perform the entry level duties of a peace officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning.

LEA 1003 - Basic Law Enforcement Academy III (2)
Enhances the standards established by the Colorado P.O.S.T. Board and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a Police Officer. Emphasis will be on expanding the Colorado P.O.S.T. curriculum to create a unique learning experience.

Corequisite: This course and LEA 1001, LEA 1002, LEA 1004, LEA 1005, LEA 1006, LEA 1007 and LEA 1008 may be taken at the same time.

LEA 1004 - Basic Law Enforcement Academy IV (1)
Enhances the standards established by the Colorado P.O.S.T. Board and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a Police Officer. Emphasis will be on expanding the Colorado P.O.S.T. curriculum to create a unique learning experience.

Corequisite: This course and LEA 1001, LEA 1002, LEA 1003, LEA 1005, LEA 1006, LEA 1007 and LEA 1008 may be taken at the same time.

LEA 1005 - Basic Law (8)
Conforms to the Colorado POST standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace officer. Emphasis will be on United States Constitution, arrest, search and seizure, interrogation and confessions, rules of evidence, Colorado Criminal Code, Colorado Children's Code, Liquor Code and controlled substances.

LEA 1006 - Arrest Control Techniques (3)
Conforms to POST (Peace Officer Standards and Training) standards and Colorado state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace office. Exploration of the skills, knowledge and abilities necessary to effectively maintain control of a suspect when making an arrest. Explains the continuum of force and de-escalation of force.

LEA 1007 - Law Enforcement Driving (3)
Exploration of the skills, knowledge and abilities required for operation of a law enforcement vehicle. Emphasizes defensive driving. Enables students to demonstrate skills by driving a vehicle under simulated conditions.

LEA 1008 - Firearms (3)
Conforms to POST (Peace Officer Standards and Training) standards and Colorado state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace officer. Discusses the skills, knowledge and abilities necessary to safely use police firearms. Students will demonstrate skills by firing weapons on a firing range. The student will demonstrate basic safety techniques and will be able to explain the firearms role within the continuum of force.

LEA 1040 - Wellness for Law Enforcement (1)
Addresses the unique demands of law enforcement (LE) focusing on the distinctive physical demands of firearms proficiency, arrest control, and officer survival. This course focuses on overall conditioning that optimizes flexibility, muscular strength and endurance, cardiovascular fitness, and body composition. This course also covers the emotional, psychological, and physical responses to stress, how they interfere with a peace officer's performance and relationships, and provides strategies for long-term health and wellness of officers.

LIT - Literature

LIT 1015 - Intro to Literature I: GT-AH2 (3)
Introduces fiction, poetry, and drama. This course emphasizes active and responsive reading. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2001 - World Literature to 1600: GT-AH2 (3)
Examines significant writings in world literature from the ancients to the seventeenth century. It emphasizes active reading and understanding of the works and their cultural backgrounds. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2002 - World Literature After 1600: GT-AH2 (3)
Examines significant writings in world literature from the seventeenth century to the present. It emphasizes active reading and understanding of the works and their cultural backgrounds. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2005 - Race, Ethnicity, and Culture: GT-AH2 (3)
Examines the cultural, historical, and social contexts impacting multiple ethnic American identities through critical reading and analysis. This course focuses on significant works by authors who identify as African American, Native American, Latino/a, Asian American, and other ethnicities. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2011 - American Lit to Civil War: GT-AH2 (3)
Examines American literary works from pre-European arrival on the continent up to the Civil War, including works from diverse

people that contributed to American literature. This course also explores historical and social contexts within various genres. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2012 - American Lit After Civil War: GT-AH2 (3)
Examines American literary works from 1865 to the present, distinguishing among literary themes, genres, and schools of thought that illustrate historical and social contexts across a multicultural spectrum. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2021 - British Literature to 1770: GT-AH2 (3)
Examines major works of British literature from the Anglo-Saxon period through the 17th century. Explores the historical, political, and social contexts of the works as well as the major themes which reflect and/or critique the social assumptions and values of the times. Besides fostering an understanding of works essential to western culture, the course will examine how these works are still influential and relevant to contemporary thought and culture. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2022 - British Literature Since 1770: GT-AH2 (3)
Examines major works of British literature from the 18th century to the present. Explores the historical, political, and social contexts of the works and the major themes authors used to reflect and critique the social assumptions of their times. Besides fostering an understanding of works essential to western culture, the course examines how these works are still influential and relevant to contemporary thought and culture. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2025 - Intro to Shakespeare: GT-AH2 (3)
Explores works by William Shakespeare, focusing on a careful reading of these works as well as an exploration of pertinent contextual and historical information. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2035 - Science Fiction (3)
Examines the techniques and issues of science fiction through a close reading of a variety of writers in the genre.

LIT 2046 - Literature of Women: GT-AH2 (3)
Examines the techniques and themes in literature of various genres by and about women by considering what it means for women to be in literature, as characters and also as authors. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2048 - Native American Literature (3)
Examines oral and written literature created by Native American Peoples. Emphasizes narrative and ceremonial literature from the oral tradition. Examines oratory, autobiography, essays, poetry, short stories, and novels as oral and written forms.

LIT 2055 - Children's Literature: GT-AH2 (3)
Examines the criteria for selecting appropriate literature for children. Explores literature through a variety of genres, age levels, values taught through literature, and literary and artistic qualities of various texts. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2057 - Literature and Film (3)
Examines the relationship between literature and motion pictures, emphasizing the technique and interpretive function of filmmakers.

LIT 2058 - Latinx Literature: GT-AH2 (3)
Examines the cultural, historical, and social contexts impacting Latinx identities through critical reading and analysis. This course focuses on significant works, including poetry, drama, and/or fiction, by Latinx authors.

LIT 2059 - Survey African American Lit: GT-AH2 (3)
Examines African American literature from 1750 to the present. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

LIT 2067 - 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.

LIT 2068 - Celtic Literature: GT-AH2 (3)
Exposes the student to Celtic literature. The course examines significant writings in Celtic 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. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Offered: *(GT-AH2).

MAC - Machining Technology

MAC 1000 - Machine Shop Safety (1)
Covers the hazards of a machine shop including health and safety, locating essential safety information from a code or other standard, location and use of safety and emergency equipment, and identifying and applying shop safety procedures.

Corequisite: MAC 1001, MAC 1002, MAC 1010, MAC 1020 and one of the following math courses: MAT 1150, MAT 1420, MAT 1440 or MAT 2410 or higher.

MAC 1001 - Introduction to Machine Shop (3)
Covers safety procedures, use of bench tools, layout tools, power saws, drill presses, precision measurement tools, and various hand tools related to the machine shop. Also included are sharpening drill bits and general-purpose turning tools for the lathe and determining speeds and feeds for both the lathe and the milling machine.

Prerequisite: MAC 1000 and one of the following math courses: MAT 1150, MAT 1420, MAT 1440, MAT 2410 or higher.

Corequisite: MAC 1000 and MAT coursework can be taken concurrently with this course.

MAC 1002 - Print Reading for Machinists (3)
Instructs students in reading and understanding industrial prints. This course covers basic drafting and print standards, fundamentals of shape description, fundamentals of size description and annotation, industrial drawing types, and specialized parts and prints. Symbol interpretation, tolerancing and dimensioning standards are also covered.

Prerequisite: MAC 1000 and one of the following math courses: MAT 1150, MAT 1420, MAT 1440, MAT 2410 or higher. Corequisite: MAC 1000 and MAT coursework may be taken concurrently with this course.

MAC 1010 - Introduction to Engine Lathe (3)
Introduces basic lathe applications which will consist of identifying lathe components and controls, understanding turning safety, calculating speeds and feeds, using various tools and tool holders, identifying basic tool geometry, and the use of common lathe spindle tooling. Students will perform basic lathe operations, which will consist of facing, center-drilling, chuck turning, turning between centers, boring, grooving, tapers, knurling, and single point threading. Students will be required to produce specified parts to a tolerance of +/- .004 in. and perform competencies set by manufacturing standards.

Prerequisite: Prerequisite/Corequisite: MAC 1000, MAC 1001, MAC 1002 and one of the following math courses: MAT 1150, MAT 1420, MAT 1440, MAT 2410 or higher.

MAC 1020 - Introduction to Milling Machine (3)
Teaches students to identify the major parts of the vertical mill, align a vise, use an indicator, edge finder, and boring head, determine speeds and feeds perform simple indexing, mill flat, square surfaces and slots, drill, bore, and tap holes, and work within a plus or minus .002 inch tolerance.

Prerequisite: Prerequisite/Corequisite: MAC 1000, MAC 1001, MAC 1002 and one of the following math courses: MAT 1150, MAT 1420, MAT 1440, MAT 2410 or higher.

MAC 1042 - 3D Modeling Fabrication Lab (1)
Introduces common machining practices including safety procedures, inspection techniques, operation of common machining processes, and other fabrication equipment. The course will utilize an industry standard 3D modeling package to produce a manufactured assembly and is designed for pre-engineering students.

Corequisite: CAD 2455.

MAC 1078 - Machining Workshop: I (4)
Provides students with an experiential learning opportunity.

Prerequisite: (MAT 1150, MAT 1420, MAT 1440, MAT 2410 or higher), MAC 1000, MAC 1001, MAC 1002, MAC 1010, MAC 1020, MAC 2001, MAC 2002, MAC 2005, MAC 2006, and (MAC 2040 or MAC 2043). Corequisite: MTE 1130, EGT 2305, CAD 2455.

MAC 2001 - Intro to CNC Turning Operations (3)
Introduces basic writing and editing of CNC lathe programs. G&M codes, math, speeds and feeds, production processes including basic process controls, and documentation associated with manufacturing will be covered.

Prerequisite: MAC 1000, MAC 1001, MAC 1002, MAC 1010, MAC 1020 and one of the following math courses: MAT 1150, MAT 1420, MAT 1440, MAT 2410 or higher.

MAC 2002 - CNC Turning Operations II (3)
Covers skills in writing and editing advanced CNC lathe programs. G&M codes, math, speeds and feeds, production processes including multi-part, process controls, and documentation associated with manufacturing will be covered.

Prerequisite: Prerequisite/Corequisite: MAC 2001. This course and MAC 2001 may be taken at the same time.

MAC 2005 - Intro to CNC Milling Operations (3)
Introduces basic creating and editing of CNC mill programs. Introduction to G&M codes, math, speeds and feeds, production processes including process controls, and documentation associated with manufacturing will be covered.

Prerequisite: MAC 1000, MAC 1001, MAC 1002, MAC 1010, MAC 1020 and one of the following math courses: MAT 1150, MAT 1420, MAT 1440, MAT 2410 or higher.

MAC 2006 - CNC Milling Operations II (3)
Further develops skills in writing and editing advanced CNC mill programs. G&M codes, math, speeds and feeds, production processes including multi-part, process controls, and documentation associated with manufacturing will be covered.

Prerequisite: Prerequisite/Corequisite: MAC 2005. This course and MAC 2005 may be taken at the same time.

MAC 2040 - CAD/CAM 2D (3)
Provides the student with the essential concepts and techniques that are required to successfully create part geometry, generate tool path, verify tool path models, and post process the NC codes. The student will be exposed to a 2-axis machining, 3-axis machining wire frame and surface modeling, lathe programming, and DNC systems. Programming projects and models will be demonstrated in the CNC manufacturing lab.

Prerequisite: MAC 2001 and MAC 2005.

MAC 2043 - Mastercam (4)
Introduces the concepts of creating basic 2D and 3D Mastercam wireframes, building and manipulating surfaces and solids. The practices and techniques of fixture incorporation, tool pathing, and machine code generation will be discussed. Basic user interfaces and custom interface setup will be covered, as well as common file storage.

Prerequisite: Prerequisite/Corequisite: MAC 2001 and MAC 2005.

MAC 2078 - Machining Workshop: II (4)
Provides students with an experiential learning opportunity.

Prerequisite: MAC 1078.

MAN - Management

MAN 1005 - Logistics Management (3)
Introduces the fundamental facets of logistics in supply chain management utilizing a systems approach to: manage activities associated with traffic, logistical support, regulations, transportation, inventory management and control, warehousing, packaging, order processing, and materials handling.

MAN 1016 - Principles of Supervision (3)
Defines supervision, examines the functions of a supervisor, explains the necessary skills for successful supervision, relates supervision with human resources, and discusses supervisory challenges.

MAN 1025 - Team Building (1)
Introduces the concept of working as a team member. This course emphasizes the ability to negotiate, collaborate, build consensus, and make quality decisions.

MAN 1028 - Human Relations in Organizations (3)
Introduces interpersonal relations most directly linked to attainment of organizational and individual goals in the business world. Other factors include motivation, career development, and conflict resolution. It explores the importance of effective communication in organizations. Addresses organizational issues such as employee motivation and customer complaints as related to product or service defects.

MAN 2000 - Human Resources Management I (3)
Provides an overview of the contemporary issues, theories and principles used to effectively manage human resources. Topics covered include job analysis and design, talent acquisition and retention, planning and recruiting human resources, selecting employees, job placement, employee training and performance management, compensation and benefits, and retaining employees.

MAN 2001 - Human Resources Management II (3)
Offers a strategic discussion of concepts of human resources utilizing practical application and theory. Emphasizes human resource trends, equal opportunity and safety, workforce training and development, appraising and improving performance, labor relations, legal and global issues in human resources.

MAN 2012 - Negotiation & Conflict Resolution (3)
Presents proper techniques in negotiation and conflict resolution. Explore the important practices that determine successful negotiation in business. Other key elements discussed are: principles of conflict resolution including business policies, accepted business contracts, labor union contracts, pay raises, and starting salaries.

MAN 2015 - Organizational Behavior (3)
Introduces the behaviors of groups and individual members of organizations and how to influence their behavior. Emphasis is on the tool manager's use to achieve organizational effectiveness.

MAN 2016 - Small Business Management (3)
Examines the elements necessary for the successful formation of a new small business and to enhance the skills of those already involved in the operation of a small business. This course includes the development of a complete small business plan.

MAN 2024 - Leadership (3)
Focuses on the leadership skills for contemporary organizations. Covers development and communication and a shared vision to motivate and empower employees to manage conflict, to negotiate, and to develop teams.

MAN 2025 - Managerial Finance (3)
Examines the concepts and techniques used to analyze financial accounting information for managerial planning, decision-making and control. The focus of the course is on decision-making relating to the areas of budgets, forecasts, cost volume production, Return on Investment (ROI) and financial statements.

MAN 2026 - Principles of Management (3)
Provides an overview of the principles of management. Emphasis is on the primary functions of planning, organizing, staffing, leading and controlling with a balance between the behavioral and operational approaches.

MAN 2030 - Corporate Ethics & Social Resp (3)
Examines the concept of ethical corporate responsibility and how an organization's resources, including individual employees and work groups of the corporation, identify and respond to social and ethical problems. Included in the course are topics of corporate ethics and social responsibility, how these concepts apply to business and management principles, and the individual corporate citizen’s involvement with making ethical decisions.

MAN 2040 - 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.

MAN 2041 - Project Management in Organizations (3)
Investigates the concepts and applicability of project management within organizations. It examines the unique nature of the project management structure including its emphasis on integrated decision making throughout a lifecycle of a product from the planning, implementing, monitoring, and controlling phases. Emphasis is on the processes of initiating, planning, executing, controlling, and closing activities of project management.

MAN 2043 - Project Management in Action (3)
Introduces major activities and tools in Project Management related to resources, risk and quality. There is a heavy focus to provide how to manage the human element of project management. Specific Project Management tools and methodologies are introduced and used.

MAP - Medical Assisting Professional

MAP 1010 - Medical Office Administration (4)
Introduces the administrative duties specifically used in medical offices.

MAP 1020 - Medical Office Financial Management (4)
Covers the practical uses of accounts and records with emphasis on accounting principles and analysis for use in a medical office. 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 codes), thus establishing the medical necessity required for third-party reimbursement.

MAP 1050 - Pharmacology for Medical Assistants (3)
Provides an overview of pharmacology language, abbreviations, systems of measurement and conversions. The Controlled Substances 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.

MAP 1083 - Medical Assistant Internship (4)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

Prerequisite: Prerequisite/Corequisite: MAP 2038 and MAP 2040.

MAP 2038 - Medical Assisting Laboratory (4)
Introduces basic, routine laboratory skills and techniques for collection, handling, and examination of laboratory specimens often encountered in the ambulatory care setting.

Prerequisite: MAP 1010, HPR 1032, and HPR 1038 and. Corequisite: Prerequisite/Corequisite: MAP 1050.

MAP 2040 - Medical Assisting Clinical Skills (4)
Provides hands on experience with clinical skills required in medical offices. Delivers theory and skills presentations allowing for students to properly demonstrate techniques for a variety of medical needs.

Prerequisite: MAP 1010, HPR 1032 and HPR 1038 and. Corequisite: Prerequisite/Corequisite: MAP 1050.

MAP 2069 - Review for Medical Assistant National Exam (1)
Prepares the candidate sitting for the National Registration/Certification examination for Medical Assistant through review and practice. These examinations are given with the intent of evaluating the competency of entry-level practitioners in Medical Assisting, supporting quality care in the office or clinic.

Prerequisite: Prerequisite/Corequisite: MAP 2038 and MAP 2040.

MAR - Marketing

MAR 1011 - 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.

MAR 1017 - 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.

MAR 1055 - Social Media for Marketing in Business (3)
Teaches students how to use social media as a business strategy and covers how to match that strategy with the goals of the business. This course addresses current trends, ethics, regulations, legal challenges, strategy, content development, and change management. This course helps students develop a better understanding of how marketing with social media is similar to and different from traditional marketing and how to best use online methods to further business goals.

MAR 2016 - 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.

MAR 2020 - 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.

MAR 2035 - 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.

MAR 2040 - 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.

MAT - Mathematics

MAT 0100 - Quantitative Literacy Lab (1)
Supports skill development for students registered in MAT 0200 Quantitative Literacy. Topics covered in this course include those defined in MAT 0200 and/or any pre-requisite skills needed by the student.

Corequisite: MAT 0250. This course and MAT 0250 may be taken at the same time.

MAT 0140 - Career Math Support (2)
Supports skill development necessary for success within Career Math.

Corequisite: MAT 1140.

MAT 0200 - Algebraic Literacy Lab (1)
Supports skill development in students registered in MAT 0300 Algebraic Literacy. Topics covered in this course include those defined in MAT 0300 and/or any prerequisite skills needed by the student.

Corequisite: MAT 0300. This course and MAT 0300 may be taken at the same time.

MAT 0240 - Math for Liberal Arts Support (2)
Supports skill development necessary for success within Math for Liberal Arts.

Corequisite: MAT 1240.

MAT 0250 - Quantitative Literacy (4)
Develops number sense and critical thinking strategies, introduces algebraic thinking, and connects mathematics to real world applications. Topics in this course include ratios, proportions, percent, measurement, linear relationships, properties of exponents, and math learning strategies. This course prepares students for math for liberal arts, statistics, integrated math, and college level career math courses.

MAT 0260 - Intro to Statistics Support (2)
Supports skill development necessary for success within Introduction to Statistics.

Corequisite: MAT 1260.

MAT 0300 - Algebraic Literacy (4)
Develops algebraic skills necessary for manipulating expressions and solving equations. Topics in the course include radicals, complex numbers, polynomials, factoring, rational expressions, quadratic equations, absolute value equations, systems of linear equations in two variables, related applications, and linear inequalities. This course prepares students for MAT 1340 College Algebra and Finite Math.

MAT 0320 - Finite Mathematics Support (2)
Supports skill development necessary for success within Finite Mathematics.

Corequisite: MAT 1320.

MAT 0340 - College Algebra Support (2)
Supports skill development necessary for success within College Algebra.

Corequisite: MAT 1340.

MAT 1120 - Math for Clinical Calculations (3)
Covers the mathematical calculations needed for enteral and parenteral medication administration. It is designed for students in the health disciplines. Topics include measurements, conversion between various systems of measurements, and methods of solving problems related to drug dosage and medication administration.

Prerequisite: MAT 0250 or MAT 0300 or appropriate placement scores.

MAT 1140 - Career Mathematics (3)
Covers material designed for career and technical students who need to study particular mathematical topics. Topics include measurement, algebra, geometry, statistics, and graphs. These are presented at an introductory level and the emphasis is on applications.

Prerequisite: MAT 0250 or MAT 0300 or appropriate placement scores.

MAT 1150 - Technical Mathematics (4)
Covers mathematical material designed for career and technical students. Topics include measurement, algebra, geometry, trigonometry, and vectors. These are presented at an introductory level and the emphasis is on applications.

Prerequisite: MAT 0250 or MAT 0300 or appropriate placement scores.

MAT 1220 - Integrated Mathematics I: GT-MA1 (3)
Engages students in the concepts underlying elementary school mathematics. The course emphasizes critical thinking and applications. Topics include the structure of number systems, an analysis of numerical operations, set properties, numerical and geometric patterns, and a variety of problem-solving skills. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: MAT 0250 or MAT 0300 or appropriate placement scores.

MAT 1230 - Integrated Mathematics II: GT-MA1 (3)
Engages students in the concepts underlying elementary school mathematics. The course emphasizes critical thinking and applications. Topics include probability, statistics, measurement, Euclidean geometry, and algebraic methods. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: MAT 0250 or MAT 0300 or appropriate placement scores.

MAT 1240 - Math for Liberal Arts: GT-MA1 (4)
Highlights connections between mathematics and the society in which we live and is intended for liberal arts majors. Topics include set theory and logic, mathematical modeling, probability and statistical methods, and consumer mathematics.

Prerequisite: MAT 0250 or MAT 0300 or appropriate placement scores. Offered: *(GT-MA1).

MAT 1260 - Intro to Statistics: GT-MA1 (3)
Introduces descriptive and inferential statistics, with an emphasis on critical thinking and statistical literacy. Topics include methods of data collection, presentation and summarization, introduction to probability concepts and distributions, and statistical inference of one and two populations. This course uses real world data to illustrate applications of a practical nature.

Prerequisite: MAT 0250 or MAT 0300 or appropriate placement scores. Offered: *(GT-MA1).

MAT 1320 - Finite Mathematics: GT-MA1 (4)
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. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: MAT 0300 or appropriate placement scores. Offered: *(GT-MA1).

MAT 1340 - College Algebra: GT-MA1 (4)
Focuses on a variety of functions and the exploration of their graphs. Topics include: equations and inequalities, operations on functions, exponential and logarithmic functions, linear and non-linear systems, and an introduction to conic sections. This course provides essential skills for Science, Technology, Engineering, and Math (STEM) pathways.

Prerequisite: MAT 0300 or appropriate placement scores. Offered: *(GT-MA1).

MAT 1400 - Survey of Calculus: GT-MA1 (4)
Includes derivatives, integrals, and their applications, with attention restricted to algebraic, exponential, and logarithmic functions for business, life science and/or social science majors.

Prerequisite: MAT 1340 or appropriate test scores. Offered: *(GT-MA1).

MAT 1420 - College Trigonometry: GT-MA1 (3)
Explores trigonometric functions, their graphs, inverse functions and identities. Topics include: trigonometric equations, solutions of triangles, trigonometric form of complex numbers, and polar coordinates. This course provides essential skills for Science, Technology, Engineering, and Math (STEM) pathways.

Prerequisite: MAT 1340 or appropriate test scores. Offered: *(GT-MA1).

MAT 1440 - Pre-Calculus: GT-MA1 (5)
Extends algebraic concepts and explores the subject of trigonometry. Topics include: polynomial, rational, logarithmic, and exponential functions, trigonometric and inverse trigonometric functions and their graphs, trigonometric identities, and applications. This course provides essential skills for Science, Technology, Engineering, and Math (STEM) pathways.

Prerequisite: MAT 1340 or appropriate test scores. Offered: *(GT-MA1).

MAT 2410 - Calculus I: GT-MA1 (5)
Introduces single variable calculus and analytic geometry. It includes limits, continuity, derivatives, and applications of derivatives as well as indefinite and definite integrals and some applications.

Prerequisite: MAT 1420 or MAT 1440. Offered: *(GT-MA1).

MAT 2420 - Calculus II: GT-MA1 (5)
Continues the study of single variable calculus which will include techniques of integration, analytic geometry, improper integrals, convergence of infinite numerical series and power series. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: MAT 2410. Offered: *(GT-MA1).

MAT 2430 - Calculus III: GT-MA1 (4)
Focuses the traditional subject matter of multivariable Calculus. Topics include vectors, vector-valued functions, partial derivatives, analytic geometry, multiple integrals, line integrals and applications.

Prerequisite: MAT 2420. Offered: *(GT-MA1).

MAT 2431 - Calculus III/Engineer Applications: GT-MA1 (5)
Focuses the traditional subject matter of multivariable Calculus with an additional emphasis on word problems and problem solving. Topics include vectors, vector-valued functions, partial derivatives, analytic geometry, multiple integrals, line integrals, Stokes', Divergence Theorems and Green's Theorems, and applications. A graphing calculator is required for this course.

Prerequisite: MAT 2420. Offered: *(GT-MA1).

MAT 2520 - Discrete Mathematics: GT-MA1 (4)
Concentrates on formal logic, algorithms, induction proofs, equivalence relations and graphs. This course is designed for mathematics and computer science students. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: MAT 2410. Offered: *(GT-MA1).

MAT 2540 - Linear Algebra (3)
Introduces linear algebra and emphasizes techniques of problem-solving and introductory proofs. This course includes linear systems, matrices, determinants, vector spaces, linear transformations, eigenvalues, and eigenvectors.

Prerequisite: MAT 2420.

MAT 2562 - Differential Equations with Linear Algebra (4)
Explores ordinary differential equations with an introduction to select topics in linear algebra. Course covers first and second order differential equations, series solutions, Laplace transforms, linear algebra, eigenvalues, first order systems of equations, and numerical techniques for solving differential equations.

Prerequisite: MAT 2420.

MET - Meteorology

MET 1050 - General Meteorology w/Lab: GT-SC1 (4)
Provides an introduction to general meteorology and atmospheric sciences. It includes the composition and structure of the atmosphere and characteristics that affect the atmosphere, such as temperature, pressure, and moisture. Additionally, the development of weather systems such as storm systems, hurricanes, weather fronts and cloud development will also be examined. Finally, concepts of climatology will be stressed.

Prerequisite: ENG 0092 or ENG 0093 or ENG 0094 or ENG 1021 or higher. These ENG courses may be taken with this course at the same time. Offered: *(GT-SC1).

MGD - Multimedia Graphic Design

MGD 1004 - 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.

MGD 1011 - Adobe Photoshop I (3)
Concentrates on the high-end capabilities of Adobe Photoshop 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. Course competencies and outline follow those set out by the Adobe Certified Associate exam in Visual Communication Using Adobe Photoshop.

MGD 1012 - Adobe Illustrator I (3)
Concentrates on the high-end capabilities of Adobe Illustrator as an illustration, design and vector drawing tool. Students learn how to use the tools to create digital artwork that can be used in web design, print media, and digital screen design. Course competencies and outline follow those set by the Adobe certified Associate exam in Visual Communication using Adobe Illustrator.

MGD 1013 - Adobe InDesign (3)
Introduces students to InDesign, a page layout program that integrates seamlessly with other Adobe design programs. InDesign delivers creative freedom and productivity to DTP. Class discussions and independent projects supplement hands-on classroom work.

MGD 1014 - 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.

MGD 1017 - Intro 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.

MGD 1019 - Maya I (3)
Introduces students to Maya, a high-end character animation tool. Emphasis is on building models of various types. Students learn setting up and animating scenes for render in movie format.

MGD 1020 - Intro to 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.

Corequisite: MGD 1011 or MGD 1012 or MGD 1013 unless you have already taken one of these classes.

MGD 1033 - 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.

Prerequisite: MGD 1011 or MGD 1012 or MGD 1013.

MGD 1041 - Web Design I (3)
Introduces web site planning, design and creation utilizing HTML through industry-standard development tools [may list specific software]. Emphasis is placed on applying stylistic decisions using cascading style sheets. Web-based considerations regarding color, typography, aesthetics, user interface design, and process integration with visual-based design tools will be explored.

MGD 1042 - 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, storyboards, and pre-visualization techniques necessary to create animated stories. Students will also study the history of animation and game design.

Prerequisite: MGD 1019 or MGD 1053.

MGD 1043 - Motion Graphic Design I (Software) (3)
Stresses creation of animation and dynamic interactive media for web and multimedia applications to a professional standard. Students will learn how to develop projects for time-based media, key-frames, tweens and symbols. Students will learn how to use actions to trigger timeline events to create interactive behaviors.

MGD 1053 - 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.

MGD 1063 - 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.

MGD 1064 - Digital Video Editing I (3)
Introduces digital non-linear video editing. Students will capture, compress, edit, and manipulate video images using a personal computer. Assembly techniques including media management, editing tools, titles, and motion control; transitions and filters, and special effects are explored.

MGD 1065 - 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.

MGD 1067 - 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.

MGD 2002 - 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.

Prerequisite: MGD 1012.

MGD 2003 - Design and Concept (3)
Covers the process of comprehensive problem solving of complex and advanced print design. Provides experience in digital production of designs, using multiple computer applications emphasizing concept.

Prerequisite: MGD 1012.

MGD 2004 - Videography II (3)
Offers advanced study of digital video imaging concepts using digital cameras. Heavy emphasis is placed upon media aesthetics and the creative integration of sight, sound, and motion in student projects.

Prerequisite: MGD 1004.

MGD 2011 - Adobe Photoshop II (3)
Develops and reinforces image composition techniques learned in Adobe Photoshop I, MGD 1011. Fundamentals are continuously reinforced as new design techniques are introduced.

Prerequisite: MGD 1011.

MGD 2012 - Adobe Illustrator II (3)
Enables the student to continue development of electronic drawing skills through practice and use of state-of-the-art illustration software.

Prerequisite: MGD 1012.

MGD 2033 - Graphic Design II (3)
Continues instruction in idea development for advanced graphic design.

Prerequisite: MGD 1033.

MGD 2041 - Web Design II (3)
Expands on previously learned fundamentals of HTML introducing cascading style sheets, DHTML, JavaScripts and CGI forms. Color usage and interface design principles are

emphasized in this course. In this course we'll examine websites that employ more complex structures, optimal site architecture and navigation necessary for larger and more complex sites.

Prerequisite: MGD 1041.

MGD 2043 - Web Motion Graphic Design II (3)
Stresses the complex creation of 2D animated motion graphics concentrating on the prior skills learned and the use of scripting and behaviors. Students will create motion graphics using these skills and apply them to websites. Website justification of motion graphics will be stressed, appraised and weighed.

Prerequisite: MGD 1043.

MGD 2044 - Integrated Multimedia Development 1 (3)
Plans and produces content for a single large-scale video/multimedia project, which stimulates a professional multimedia design agency. Students are exposed to all phases of digital media production with a focus on meeting with clients, creating proposals, researching, interviewing, writing, video/audio recording/editing, and titling. Students learn to meet real deadlines and work collaboratively.

Prerequisite: MGD 1013 or MGD 2004.

MGD 2045 - Integrated Multimedia Development 2 (3)
Continues from Integrated Multimedia Development 1. Students will create and deliver a single large-scale video/multimedia project. Students are exposed to all phases of post-production, with a focus on editing, animating and delivering the product on time. Students gain experience of working as a professional video and digital media agency and leave with a portfolio/demo reel piece.

Prerequisite: MGD 2044.

MGD 2053 - 3D Animation II (3)
Addresses more advanced aspects of creating 3D characters on the computer. Students also examine facial animation, lip synchronization, scene design and lighting set-ups.

Prerequisite: MGD 1053.

MGD 2056 - 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.

Prerequisite: (MGD 1020 or MGD 1014) and MGD 1012 and MGD 1013.

MGD 2057 - Animation Production (3)
Examines development of 3D animation from a production standpoint. The process of transforming conceptual designs into actual projects is explored. Students study the management function of those tasks associated with the business end of development. The student will produce a 3D animation project.

Prerequisite: MGD 1019 or MGD 1053.

MGD 2058 - User Exp/Interface UX/UI (3)
Provides a project-based introduction of the design process of user experience and user interface. This course emphasizes practical methods and approaches based on user need for solving design problems. Other focuses of the course include user testing and research methods, design prototyping, and design validation.

MGD 2059 - Management & 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.

MGD 2064 - Digital Video Editing II (3)
Looks at the more complex and advanced techniques of digital video editing. Areas of editing such as masking, filtering, blue/green screening, track mattes, and image mattes will be examined. Students will produce a movie project in this class and discuss practical ways to distribute to various audiences.

Prerequisite: MGD 1064.

MGD 2067 - Game Design II (3)
Explores more advanced features of game design. Students examine such things as integration of mainline code, subroutines and interrupts into game structure. I/O structure, playtesting and distribution are emphasized.

Prerequisite: MGD 1067.

MGD 2068 - Business for Creatives (3)
Presents a guide to freelance work and a study of business practices and procedures and models unique to creative occupations (graphic design, web design, animation, fine arts). Discussion includes determining charges, business forms, business planning, tax structure, licenses and registration, self-promotion (resume, website, portfolio, business identity package). Course may include visits by professionals in the field and discussion of career opportunities in a quickly changing career field.

MGD 2080 - Internship (2)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/ coordinator.

Prerequisite: Department approval is required.

MGD 2088 - Practicum (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

MGD 2089 - Capstone (3)
Focuses on demonstrated culmination of learning within a given program of study.

MIL - Millwright

MIL 1001 - Lifting Devices (1)
Introduces the student to the types of rigging/lifting devices used in industry. Skills include the correct use of slings and common rigging hardware, including safe loading practices and the use of ANSI hand signals.

Prerequisite: Prerequisite/Corequisite: MTE 1102. This course and MTE 1102 may be taken at the same time.

MST - Massage Therapy

MST 1006 - A & P for Massage Therapy (4)
Provides a general knowledge of the anatomy and physiology of the body systems with focus on the anatomy and physiology of the muscular and skeletal systems. This course is designed specifically for individuals specializing in massage therapy.

MST 1011 - Massage Therapy Fundamentals (4)
Describes the fundamental skills and knowledge necessary to perform therapeutic massage that incorporates an understanding of the physiological and psychological effects and overall health benefits of this modality. This course will cover the history of massage therapy, contraindications, hygiene, session documentation, body mechanics, appropriate draping, and the basic stroke techniques of Swedish massage for seated and table massage. A focus on palpation and increasing comprehension of muscle anatomy will be incorporated throughout this course.

Prerequisite: Prerequisite/Corequisite: IHP 1011 and acceptance into the Massage Therapy program.

MST 1074 - Massage Clinical I (2)
Provides an experiential learning opportunity.

MST 1078 - Seminar (1-4)
Provides students with an experiential learning opportunity.

MST 1084 - Clinical Massage I (2)
Applies skills in a clinical setting. Focuses on improvement of massage therapy skills, ethics, and communication.

Prerequisite: Prerequisite/Corequisite: This course and MST 1011 may be taken at the same time.

MST 2008 - Musculoskeletal Anatomy (2)
Provides an advanced and applied study of the musculoskeletal system for massage therapy students, other bodyworkers, and/or movement instructors. This highly kinesthetic course allows for intensive focus on recognizing the bony landmarks; understanding the origins, insertions and actions of the muscles; locations of the major nerve pathways; and locations of other anatomical structures in order to improve and refine palpation skills in those training to become professional bodyworkers.

Prerequisite: IHP 1011. Corequisite: MST 1011. This course and MST 1011 may be taken at the same time.

MST 2011 - Therapeutic Massage Techniques (3)
Applies anatomical knowledge and direct application of advanced massage therapy techniques. This course examines causes for commonly occurring conditions that are regularly treated with therapeutic massage. This course will discuss ethical standards, client assessment, and development of treatment plans and proper protocol for documenting sessions. Preparation for successfully passing the national exam as well as professionalism, self-care, and marketing oneself as a Licensed Massage Therapist will also be addressed.

Prerequisite: MST 1011. Corequisite: HPR 1017. This course and HPR 1017 may be taken at the same time.

MST 2016 - Pathology for Massage Therapy (3)
Focuses on basic knowledge of disease, injury and health to assist the massage therapist to promote healing, ease pain and discomfort, and avoid complications during massage therapy sessions. With a broad perspective of pathology and specific pathophysiology of diseases contributing to the need for massage therapy, this course provides the foundational science for safe practice as well as addresses the impact of massage on overall health and well-being.

Prerequisite: Prerequisite/Corequisite: MST 2011. This course and MST 2011 may be taken at the same time.

MST 2074 - Massage Clinical II (2)
Provides an experiential learning opportunity.

MST 2084 - Clinical Massage II (2)
Provides an application of massage therapy skills in a clinical setting. This course focuses on improvement of techniques, communication with clients and other health professionals as well as documentation of massage sessions.

MST 2089 - Capstone (1-4)
Demonstrates the culmination of learning within a given program of study.

MTE - Manufacturing Technology

MTE 1100 - Print Reading for Manufacturing (3)
Instructs students in reading and understanding industrial prints. This course covers basic drafting and print standards, fundamentals of shape description, fundamentals of size description and annotation, industrial drawing types, and specialized parts and prints. Symbol interpretation, tolerancing and dimensioning standards are also covered.

MTE 1102 - Safety Manufacturing Environment (1)
Introduces Occupational Safety and Health Administration (OSHA) federal and state regulations, industrial practices, and accident investigation techniques; including topics such as hazard communication standards, lockout/tagout procedures, eye safety, lifting techniques, electrical safety, stored energy safety, Personal Protective Equipment (PPE), and safety program development and monitoring.

MTE 1110 - Applied Communication & Teamwork in Industry (3)
Provides the student with an in-depth focus on the fundamental concepts and approaches required by industry to establish strong comprehensive and recognized skills in the areas of critical thinking, emotional intelligence, team dynamics, leadership roles, conflict resolution and results oriented communication skills. This course is taught from a contextualized format.

MTE 1130 - 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.

MTE 2080 - Manufacturing Internship (1)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

MTE 2089 - Manufacturing Capstone (1)
Provides a demonstrated culmination of learning within a given program of study.

MTE 2220 - Lean Six Sigma (4)
Focuses on the statistical modeling approaches to process and product improvement through the reduction of waste (lean) and defects (six sigma) while introducing methodology such as the Define-Measure-Analyze-Improve-Control (DMAIC), common in the manufacturing and service industries.

Prerequisite: MAT 1140 or higher.

MTE 2320 - Fluid Power Control (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.

Prerequisite: MTE 1102. Corequisite: MAT 1140 or higher.

MUS - Music

MUS 1000 - Music Theory Fundamentals I (3)
Focuses on the foundational elements of music theory. The course will cover clef reading, pitch and rhythmic notation, intervals, scales, key signatures, triads and diatonic chords, and an introduction to ear training and sight singing. The course will help beginning music students, including those who have limited background reading music notation and understanding the fundamentals of music theory.

MUS 1001 - Music Theory Fundamentals II (3)
Continues to develop fluency with foundational elements of music theory through continued drills and exercises. The course expands on principles of music notation, harmonization, intervals, chord analysis, rhythm, ear training, and sight singing. The course will help non-music major students who wish to further develop fluency in fundamental music theory and music notation.

MUS 1006 - 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.

MUS 1010 - Music Theory I (3)
Reviews and builds upon music fundamentals, diatonic harmony, phrase structure, and analysis. The course introduces voice leading and four-part harmony in root position and inversions.

MUS 1011 - Music Theory II (3)
Introduces harmony through four-part writing studying principles of harmonic progression, modulation, diatonic seventh chords, secondary dominants, keyboard harmony, and score analysis of binary and ternary form.

MUS 1012 - Ear Training/Sight-Singing I Lab (1)
Provides exercises in sight singing, rhythmic reading, and melodic and rhythmic dictation. The course will include performance of melodies and rhythmic reading exercises. Ear training dictation topics includes rhythm, intervals, diatonic scales, melody, triad types, and scales.

MUS 1013 - Ear Training/Sight-Singing II Lab (1)
Continues to develop sight singing, rhythm reading, and dictation skills. The course includes expanded exercises in sight singing, rhythmic reading, and melodic and rhythmic dictation, as well as performance of melodies and rhythmic reading exercises. This course includes ear training topics.

MUS 1020 - Music Appreciation: GT-AH1 (3)
Introduces the study of music focusing on intelligent listening skills, the elements of music and their relationships, the musical characteristics of representative works and composers, common musical forms and genres of various Western, and non-Western historical style periods. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

MUS 1021 - Music History Medieval - Classical: GT-AH1 (3)
Provides an historical survey of Western art music from the Middle Ages into the Classical period, including styles, genres, composers, works, and significant cultural and historical influences upon the repertoire. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

MUS 1022 - Music History Romantic - Present: GT-AH1 (3)
Provides an historical survey of Western art music connecting the classical period to the Romantic period and following to the present. This course includes the study of styles, genres, composers, works, and significant cultural and historical influences upon the repertoire. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

MUS 1023 - Survey of World Music: GT-AH1 (3)
Provides an overview of music from around the globe including folk, ethnic, non-Western and popular styles. Develops basic listening skills and builds a historical/cultural context for world music styles to enable an understanding and appreciation of global music. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

MUS 1025 - History of Jazz: GT-AH1 (3)
Provides an overview of jazz history covering the basic materials of music and the forms, media, genres, and the historical and cultural framework of each style period. This course emphasizes the building of critical listening tools and the development of a jazz music vocabulary. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

MUS 1026 - History of Rock and Pop (3)
Provides a survey of basic materials of music, musical forms, media, genres, and musical style of American rock and popular music from the late 19th century to the present. Focus of the course will be on studying genres and styles within the context of their role in American society, culture, and political landscape.

MUS 1031 - Music Class I (Guitar, Piano or Voice) (2)
Provides group instruction in music, introducing basic techniques, repertoire, and sight-reading.

MUS 1032 - Music Class II (Guitar, Piano or Voice) (2)
Provides group instruction in music, continuing to develop basic techniques, repertoire, and sight-reading.

MUS 1041 - Private Instruction (1-2)
Focuses on individual instruction: instrument, voice, conducting, or composition.

MUS 1042 - Private Instruction II (1-2)
Continues individual instruction: instrument, voice, conducting, or composition.

MUS 1043 - Private Instruction (1-2)
Continues individual instruction: instrument, voice, conducting, or composition.

MUS 1044 - Private Instruction (1-2)
Continues individual instruction: instrument, voice, conducting, or composition.

MUS 1051 - Ensemble I (1)
Provides opportunities for students to perform in ensembles. Ensembles will perform a diverse variety of musical styles and genres. Rehearsal techniques, performance skills, and professionalism are key components of this course.

MUS 1052 - Ensemble II (1)
Provides opportunities for students to perform in ensembles. Ensembles will perform a diverse variety of musical styles and genres. Rehearsal techniques, performance skills, and professionalism are key components of this course.

MUS 1053 - Ensemble III (1)
Provides opportunities for students to perform in ensembles. Ensembles will perform a diverse variety of musical styles and genres. Rehearsal techniques, performance skills, and professionalism are key components of this course.

MUS 1054 - Ensemble IV (1)
Provides opportunities for students to perform in ensembles. Ensembles will perform a diverse variety of musical styles and genres. Rehearsal techniques, performance skills, and professionalism are key components of this course.

MUS 1061 - Computer Music Applications I (3)
Introduces audio signal flow, Digital Audio Workstation (DAW), current computer music software, digital audio practices, Musical Instrument Digital Interface (MIDI) sequencing, and audio for video.

MUS 1062 - Computer Music Applications II (3)
Further explores the technical and creative use Digital Audio Workstation (DAW) environment. Sound design using analog and digital synthesis and sampling, digital signal processing, and mastering and audio formats will be among the topics explored.

MUS 1063 - Music Audio Production I (3)
Provides music majors and students with a strong interest in music with a basic understanding of the music audio production process. The course covers the fundamentals of audio/music production and signal flow, fundamentals of sound, acoustics, and microphones, digital and analog technology, recording, and mixing.

MUS 1064 - Music Audio Production II (3)
Refines techniques and emphasizes critical listening in the acoustic and Digital Audio Workstation environments.

MUS 1067 - Music Business I (3)
Provides a foundational overview of the current, historic, and projected business practices in the music entertainment industry. Course provides opportunities to gain an understanding of the music entertainment industry including copyright, labels, publishing, licensing, distribution, marketing, finance, legal considerations, and current and future opportunities.

MUS 1068 - Audio Post Production I (3)
Explores the steps in audio production following initial sound capture and overdubbing of sound. Key concepts include sound design, mixing, and addition of effects. Integration of music with picture is also discussed, and key concepts such as automatic dialogue replacement, foley, score, and voiceover recording are covered.

MUS 1084 - Internship (2)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

Prerequisite: No Prerequisites or Recommended Preparation.

MUS 2010 - Music Theory III (3)
Continues the study of harmony and four-part writing, chromatic harmony, modulation, score and form analysis.

MUS 2011 - Music Theory IV (3)
Continues the study of chromatic harmony and analysis. This course introduces 20th and 21st century compositional techniques, including Impressionism, serialism, non-tertian harmonies, and further study in forms and analysis.

MUS 2012 - Ear Training/Sight-Singing Lab III (1)
Covers sight singing and melodic dictation using modulation and chromaticism. It covers harmonic dictation including diatonic and chromatic harmonic progressions. It will emphasize rhythmic reading and dictation including syncopation and asymmetrical meters.

MUS 2013 - Ear Training/Sight-Singing Lab IV (1)
Covers sight singing and ear training skills related to musical styles since 1900.

MUS 2031 - Music Class I (2)
Applies the fundamentals of music to the voice or specific musical instruments. The course also introduces basic techniques, repertoire, and sight-reading. Second year, first term.

MUS 2032 - Music Class II (2)
Applies the fundamentals of music to the voice or specific musical instruments. The course also introduces basic techniques, repertoire, and sight-reading. Second year, second term.

MUS 2041 - Private Instruction (1-2)
Offers private instruction consisting of a 30- or 60-minute lesson per week. Participation in a student performance is required at least once each term.

Prerequisite: Permission of instructor.

MUS 2042 - Private Instruction (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.

MUS 2043 - Private Instruction (1-2)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4-year school. Offers private instruction consisting of a thirty or sixty-minute lesson per week. Participation in a student performance is required at least once each term for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. Second year, third term.

MUS 2044 - Private Instruction (1-2)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4-year school. Offers private instruction consisting of a thirty or sixty-minute lesson per week. Participation in a student performance is required at least once each term for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. Second year, fourth term. May be repeated for credit more than once per individual institution policy.

MUS 2045 - Private Instruction (1-2)
Offers private instruction consisting of a thirty or sixty-minute lesson per week. Participation in a student performance is required at least once each term for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. *This course can be used for repeatable credit after student has completed previous sequence of private instruction courses.

MUS 2051 - Ensemble I (1)
Rehearses and performs various types of musical literature. Second year, first term.

MUS 2052 - Ensemble II (1)
Rehearses and performs various types of musical literature. Second year, second term.

MUS 2053 - Ensemble III (1)
Rehearses and performs various types of musical literature. Second year, third term.

MUS 2054 - Ensemble IV (1)
Rehearses and performs various types of musical literature. Second year, fourth term.

MUS 2061 - Advanced Music Audio Production (3)
Designed to build upon MUS 1063 and MUS 1064 to give a well-structured and advanced knowledge of the various aspects of recording and production with music in a live and studio setting. This includes a working knowledge of microphones, audio mixing boards-analog and digital, recorders, analog and digital, mixing, sound, equalization and the fundamentals of acoustics in studio design.

MUS 2065 - Live Audio Engineering (3)
Teaches the concepts and technical skills of live sound reinforcement. Topics include basic audio concepts, the operation and interconnection of a sound system, signal processing, and live sound recording. Students will participate in special class projects and live sound sessions.

MUS 2084 - Internship (2)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

MUS 2089 - Capstone (2)
Provides a demonstrated culmination of learning within a given program of study.

NRE - Natural Resources

NRE 1001 - NRE Career/Academic Readiness (1)
Introduces data analysis instances. This course emphasizes the importance of well-written resumes and cover letters, and introduces the practical skills needed to complete large academic projects.

NRE 1021 - Introduction to Hydrology (3)
Introduces the movement of ground and surface water. Basic flow equations and graphs are used.

NRE 1100 - Foundations of Forestry (3)
Presents the principles of forest science, dendrology, forest fire behavior, and silviculture principles.

NRE 1110 - Forestry Field Techniques (3)
Emphasizes field skills in forestry including forest mensuration, timber cruising, assessing forest health conditions, and plant identification. The course provides training in equipment operation and safe chainsaw use.

Prerequisite: Prerequisite/Corequisite: NRE 1100.

NRE 1214 - Colorado Wildlife (3)
Studies the wildlife and management of wildlife in Colorado. Explores the vast natural environments of Colorado animals. Field activities to various locations are included to enhance the students' understanding of Colorado native birds, insects, reptiles, amphibians, mammals and fish.

NRE 2000 - Ecology: Field Study (3)
Recognizes the importance of ecology 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. Must have instructor permission to register.

NRE 2015 - Fire Ecology (3)
Allows students to study the ecological effects of fire. Current information and field experience will be emphasized.

Prerequisite: NRE 1100.

NRE 2025 - Environmental Education (3)
Introduces students to the history, legislation, principles, and goals of environmental literacy and education. Students will apply this understanding by creating, presenting and evaluating an environmental lesson and environmental education project.

NRE 2028 - Forest Harvesting (3)
Covers how to design environmentally, socially, and economically sound forest harvest practices, which are fundamental to sustainable forestry. The course explores good forest management in terms of appropriate planning, implementing, monitoring, and evaluating forest harvest

operations. It will cover forest harvesting methods and approaches for meeting sustainable timber utilization objectives while also protecting critical soil, water, and other forest resources.

Prerequisite: NRE 1110.

NRE 2030 - Wildlife Law Enforcement (3)
Provides an overview of the Wildlife Laws and regulations in the United States. Students examine the many methods of wildlife management, law enforcement, and forensics in this field.

Prerequisite: Prerequisite/Corequisite: NRE 2205.

NRE 2032 - Backcountry Navigation for the Natural Resource Professional (2)
Designed for the natural resource professional or those wishing to pursue a career as a natural resource professional, this course provides practical experience in navigation and other important aspects of back country travel for the natural resource officer, biologist, and researcher.

NRE 2050 - Forestry Field Techniques II (3)
Covers how to design and implement a forest inventory and how to use inventory findings to make management recommendations. The effectiveness of forestry survey design is included as well as the analysis of relevant data with basic software programs and statistics. The use of mapping and remote sensing technology to design sampling efforts will be covered. This course facilitates the mastery of measurement techniques and effective decision-making regarding survey design.

Prerequisite: NRE 1110.

NRE 2055 - Wildlife Field Techniques (4)
Provides the opportunity to gain practical experience with wildlife management methods and techniques. It focuses on designing projects based upon the ecology and natural history of the species of interest as well as accurate data collection and project implementation. The course will provide opportunity for teamwork and individual work in order to develop wildlife management, improvement, and monitoring projects. It will also provide opportunity to practice trapping and handling techniques for a variety of taxa.

Prerequisite: NRE 1214 and NRE 2205.

NRE 2065 - Wilderness Education (3)
Allows students to study areas of interest not covered in the traditional curriculum. Current information and field experience will be emphasized.

NRE 2078 - Seminar (1-3)
Provides students with a vehicle to pursue in-depth exploration of special topics of interest.

NRE 2080 - Internship (3*)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/ coordinator.

NRE 2085 - Independent Study (1-6)
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. Students are reminded that no more than six (6) credit hours of independent study may be applied to any associate degree program.

NRE 2204 - Range Management & Restoration (4)
Covers management of rangelands, important plants, rangeland communities, and restoration practices to restore disturbed ecosystems. Students will learn field measurement techniques of ecosystem components.

Prerequisite: NRE 2205.

NRE 2205 - Wildlife & Fisheries Management (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.

NRE 2245 - 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.

NUA - Nurse Aide

NUA 1001 - Nurse Aide Health Care Skills (4)
Prepares the student to perform the fundamental skills of the nurse aide. Basic nursing skills, communication skills, restorative services, personal care skills, safety and emergency care issues are covered. Includes knowledge and/or principles of asepsis, OSHA and HIPAA regulations. Ethical behaviors, cultural sensitivity and principles of mental health will be addressed, as well as patient/resident rights.

Prerequisite: Completed ENG 0092 or place into ENG 0093 or ENG 0094. Corequisite: NUA 1070.

NUA 1070 - Nurse Aide Clinical Experience (1)
Applies knowledge and skill gained from NUA 1001 to patient care.

Prerequisite: Passing specific FRCC background check, immunizations to meet OSHA requirements. Corequisite: Passing NUA 1001 with a "C" or better.

NUR - Nursing

NUR 1001 - Pharmacology Calculations (1)
Prepares nurse to provide safe, patient-centered nursing care related to dosage calculations within the respective scope of practice. This course introduces critical thinking applied to dosage calculations and communication used when interacting with patients and members of the healthcare team related to various aspects of safe administration of medications. Information technology used to document medications administered and patient technology used to deliver medications are also practiced.

Prerequisite: ENG 1021, BIO 1006, or (BIO 2101 and BIO 2102) and acceptance into the Practical Nursing Program.

NUR 1002 - Alterations in Adult Health I (4)
Provides acquisition of basic nursing theory, communication, collaboration, and critical thinking necessary for safe, patient-centered nursing care to diverse adult patients experiencing common health alterations requiring medical/surgical interventions. The course introduces Practical Nursing and

incorporates the legal and ethical responsibilities of the Practical Nurse.

Prerequisite: ENG 1021, BIO 1006, or (BIO 2101 and BIO 2102) and acceptance into the Practical Nursing Program.

NUR 1003 - Basic Health Assessment for the Practical Nurse (1)
Provides the theoretical knowledge and psychomotor skills used by the Practical Nurse performing a basic assessment of health status of stable adult patients with predictable outcomes, including collecting, reporting, and recording objective/subjective data, observing conditions or changes in condition, and differentiating normal from abnormal findings. Principles of therapeutic communication and patient teaching are included. Includes practice collecting basic assessment data in the nursing skills laboratory.

Prerequisite: ENG 1021, BIO 1006, or (BIO 2101 and BIO 2102) and acceptance into the Practical Nurse Program.

NUR 1004 - Alterations in Adult Health II (5)
Apply and expand the knowledge and skills learned in Adult Health I to provide acquisition of basic nursing theory, communication, collaboration and critical thinking necessary for safe, patient-centered nursing care for diverse adult patients with conditions that are stable and predictable. The course focuses on care of patients experiencing common health alterations requiring medical/surgical interventions. The course incorporates legal and ethical responsibilities of the Practical Nurse in the care of adults.

Prerequisite: NUR 1001, NUR 1002, NUR 1003, NUR 1005, NUR 1010, NUR 1016 and NUR 1070.

NUR 1005 - Practical Nursing Arts & Skills (6)
Employs basic nursing theory and applies that theory and theory from other co-requisite nursing courses to the performance of nursing skills. Communication, collaboration, and critical thinking necessary for safe, patient-centered nursing care are applied to the care of patients across the lifespan with stable and predictable outcomes. The course applies guidelines related to the professional, legal, and ethical scope of practice of the Practical Nurse, including demonstrating safe performance of all psychomotor skills.

Prerequisite: ENG 1021, BIO 1006, or (BIO 2101 and BIO 2102) and acceptance into the Practical Nursing Program.

NUR 1006 - Medical Surgical Nursing Concepts (7)
NUR 1006 is the first medical/surgical nursing course. Building on NUR 1009, this course provides for the acquisition of basic medical/surgical nursing theory, as well as application of mental health concepts, communication, collaboration, caring, and critical thinking/clinical reasoning necessary for safe, patient-centered care to a developmentally and culturally diverse adult patient population experiencing various medical/surgical interventions. Incorporates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the nurse. Application of knowledge and skills occurs in the nursing skills laboratory and a variety of clinical settings.

Prerequisite: NUR 1009 and NUR 1012 and MAT 1120.

NUR 1009 - Fundamentals of Nursing (6)
Nursing 1009 introduces the fundamental concepts necessary for safe, patient-centered nursing care to a diverse patient population while integrating legal and ethical responsibilities of the nurse. Introduces caring, critical thinking, the nursing process, quality improvement, and communication used when interacting with patients and members of the interdisciplinary team, and relates evidence-based nursing practice. Application of knowledge and skills occurs in the nursing skills laboratory and a variety of clinical settings providing care to stable patients with common health alternations.

NUR 1010 - Pharmacology for Practical Nursing (3)
Categorizes basic principles of pharmacology, including major drug classifications using prototype drugs, principles of medication administration including best practices for safe, quality, and patient-centered care. Discusses the legal and ethical responsibilities of the Practical Nurse related to medication administration. Application of this content is used throughout the program nursing courses.

Prerequisite: ENG 1021, BIO 1006 or (BIO 2101 and BIO 2102) and acceptance into the Practical Nursing Program.

NUR 1011 - Advancement into Practical Nursing (1)
Demonstrates the roles and responsibilities of the Practical Nurse including scope of practice, supervision, assignment, and leadership skills. Emphasis on accountability, lifelong learning, perspectives in healthcare, and career and job readiness skills for entry level nursing practice.

Prerequisite: NUR 1001, NUR 1002, NUR 1003, NUR 1005, NUR 1010, NUR 1016 and NUR 1070.

NUR 1012 - Basic Concepts of Pharmacology (2)
Overview of the basic principles of pharmacology including major drug classifications and prototypes of commonly used medications. Principles of medication administration include aspects of best practice for safe, quality, patient-centered care. Central points include safety, quality improvement factors in the administration of medications, patient teaching, and variations encountered when administering medications to diverse patient populations across the lifespan.

NUR 1013 - Basic Concepts of Maternal-Newborn Nursing (2)
Applies and expands the knowledge and skills learned in the previous and concurrent courses to provide the acquisition of basic nursing theory, communication, collaboration, and critical thinking necessary for safe, patient-centered nursing care to childbearing families. The course incorporates the legal and ethical responsibilities of the Practical Nurse in the care of childbearing families.

Prerequisite: NUR 1001, NUR 1002, NUR 1003, NUR 1005, NUR 1010, NUR 1016 and NUR 1070.

NUR 1014 - Basic Concepts of Pediatric Nursing (2)
Applies and expands on the knowledge and skills learned in the previous and concurrent courses to provide for the acquisition of basic nursing theory, communication, collaboration, and critical thinking necessary for safe, patient-centered nursing care to children and their families. The course incorporates the legal and ethical responsibilities of the Practical Nurse in the care of children.

Prerequisite: NUR 1001, NUR 1002, NUR 1003, NUR 1005, NUR 1010, NUR 1016 and NUR 1070.

NUR 1015 - Basic Concepts of Mental Health Nursing (1)
Applies knowledge of basic nursing theory, communication, collaboration, and critical thinking necessary for safe, patient-centered nursing care to diverse patients at various levels of mental health promotion and mental illness management. The course incorporates the legal and ethical responsibilities of the Practical Nurse in the care of patients with mental health issues.

Prerequisite: NUR 1001, NUR 1002, NUR 1003, NUR 1005, NUR 1010, NUR 1016 and NUR 1070.

NUR 1016 - Basic Concepts of Geriatric Nursing (1)
Applies and expands the knowledge and skills learned in the previous and concurrent courses to provide for the acquisition of basic nursing theory, communication, collaboration, and critical thinking necessary for safe, patient-centered nursing care to older adults. The course incorporates the legal and ethical responsibilities of the Practical Nurse in the care of older adults.

Prerequisite: ENG 1021, BIO 1006, or (BIO 2101 and BIO 2102) and acceptance into the Practical Nursing Program.

NUR 1021 - Success in Nursing School (1)
Addresses success strategies for beginning nursing students. Will enable the student to identify and practice strategies to optimize success in nursing school, including identifying stressors and mobilizing personal resources, study and test taking strategies using critical thinking skills, developing familiarity with medical terminology, exploring the evolving roles of the professional nurse. Additionally, explores the concepts of professionalism and collaboration.

Corequisite: NUR 1009.

NUR 1050 - Maternal Child Nursing (6)
Nursing 1050 provides for the acquisition of maternal/child nursing theory, as well as application of mental health concepts, communication, collaboration, caring, and critical thinking/clinical reasoning necessary for safe, family-centered nursing care to childbearing families and children that is developmentally and culturally appropriate. Incorporates evidence-based practice, standards of practice, quality improvement, and legal and ethical responsibilities of the nurse. Application of knowledge and skills occurs in the nursing skills laboratory and in a variety of maternal/child and pediatric clinical settings.

Prerequisite: NUR 1009 and NUR 1012 and MAT 1120.

NUR 1069 - Transition into Practical Nursing (4)
Facilitates the transition into the role of the practical nurse with emphasis on distinguishing the defined practical nurse scope of practice related to clinical practice, communication, nursing process, ethical/legal issues, and leadership skills. The student practices in the role of the practical nurse in the associated clinical experience.

Prerequisite: NUR 1006 and NUR 1050.

NUR 1070 - Clinical I (3)
Offers the clinical practicum to apply the related nursing theory.

Prerequisite: ENG 1021, BIO 1006, or (BIO 2101 and BIO 2102) and acceptance into the Practical Nursing Program.

NUR 1071 - Clinical II (2)
Offers the clinical practicum to apply the related nursing theory.

Prerequisite: NUR 1001, NUR 1002, NUR 1003, NUR 1005, NUR 1010, NUR 1016 and NUR 1070.

NUR 1072 - Clinical III (1)
Offers the clinical practicum to apply the related nursing theory.

Prerequisite: NUR 1001, NUR 1002, NUR 1003, NUR 1005, NUR 1010, NUR 1016 and NUR 1070.

NUR 1073 - Clinical IV (3)
Offers the clinical practicum to apply the related nursing theory.

Prerequisite: NUR 1001, NUR 1002, NUR 1003, NUR 1005, NUR 1010, NUR 1016 and NUR 1070.

NUR 1089 - Transition from LPN to ADN (3)
Facilitates transition of the LPN to new roles and responsibilities of the ADN, the nursing process, critical thinking, legal and ethical issues in nursing practice, and the nursing care of childbearing families and pediatric clients. Application of knowledge and skills occurs in the laboratory and maternal/child and pediatric clinical settings.

Prerequisite: Completion of preceding nursing course work with a grade of "C" or better.

NUR 2006 - Advanced Concepts of M/S Nursing I (6.5)
NUR 2006 builds on NUR 1006 (p. 245) focusing on advanced concepts of nursing applied to care of patients with high acuity medical/surgical conditions. Builds on medical/surgical nursing theory, mental health concepts, communication, collaboration, caring, and critical thinking/clinical reasoning necessary for safe, patient-centered nursing care to developmentally and culturally diverse adult patients. Incorporates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the professional nurse as applied in a variety of healthcare settings. Application of knowledge and skills occurs in the nursing skills laboratory and in a variety of clinical settings.

Prerequisite: NUR 1006 and NUR 1050 and BIO 2116.

NUR 2011 - Psychiatric-Mental Health Nursing (4)
Develops concepts of psychosocial integrity and emphasizes the function and responsibility of nursing in promoting and maintaining mental health of individuals and families. This course emphasizes communication and caring through the application of the therapeutic relationship and nursing process in the care and treatment of common psychiatric clinical conditions/disorders.

Prerequisite: NUR 1006 and NUR 1050 and BIO 2116.

NUR 2012 - Pharmacology II (2)
Builds on previously introduced pharmacological concepts and applies that learning to pharmacologic therapy to provide safe, quality, evidence-based nursing care to patients with complex healthcare needs. Focuses on safety and quality improvement factors in the administration of medications within a variety of healthcare systems. Advanced dosage calculations included.

Prerequisite: NUR 1006 and NUR 1050 and BIO 2116.

NUR 2016 - Advanced Concepts of M/S Nursing II (5)
Nursing 2016 is a continuation of NUR 2006, focusing on complex medical/surgical conditions of the high acuity patient. Builds on medical/surgical nursing theory, mental health concepts, communication, collaboration, caring, and critical

thinking/clinical reasoning necessary for safe, patient-centered nursing care to developmentally and culturally diverse adult patients experiencing high acuity medical/surgical conditions. Incorporates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the professional nurse as applied in the acute care and high acuity settings. Application of knowledge and skills occurs in a variety of clinical settings.

Prerequisite: Completion of preceding nursing coursework with a grade of C or above.

NUR 2030 - Transition to Professional Nursing Practice (4)
Nursing 2030 is a seminar and practice capstone course that provides an integrative experience applying all dimensions of the professional nurse in the care of diverse patient populations across a variety of healthcare settings. All major concepts of the nursing program are addressed. Leadership and the management of multiple patients are emphasized. Application of knowledge and skills occurs in the clinical setting to facilitate an effective transition from student to registered professional nurse.

Prerequisite: Completion of preceding nursing coursework with a grade of C or above.

NUR 2054 - RN Licensing Exam Preparation (1.5)
Will provide a review of the RN NCLEX test plan content areas, review of NCLEX style question formats and the Computerized Adaptive Testing method. Students will review study options for preparing for the RN NCLEX exam and have the opportunity to develop a customized preparation plan for success on the RN NCLEX for Professional Nursing Licensure.

Corequisite: NUR 2016 or NUR 2030.

NUR 3001 - Integration into BSN Practice (3)
Explores professional nursing practice at the baccalaureate level. Focus is on knowledge and understanding of the professional nursing standards and the nursing role at a baccalaureate level.

Prerequisite: Prerequisite/Corequisite: ENG 1022. This course and ENG 1022 may be taken at the same time.

NUR 3002 - Trends in Nursing Practice (3)
Examines current issues that nurses encounter in the health care environment including their roles and responsibilities within the nursing profession.

Prerequisite: Prerequisite/Corequisite: NUR 3001. This course and NUR 3001 may be taken at the same time.

NUR 3003 - Nursing Research/Evidence Based Practice (3)
Analyzes concepts associated with nursing research, collection, and analysis of data with emphasis on integration of evidenced-based practice within nursing. The course develops the skills for critiquing published research.

Prerequisite: NUR 3001 and Prerequisite/Corequisite: MAT 1260.

NUR 3004 - Informatics/Healthcare Technology (3)
Explores concepts and applications related to the nurse's role in utilizing healthcare informatics involving patient care technology. This course will explore the impact of information management systems on the delivery of patient care, healthcare teams, and health outcomes.

Prerequisite: NUR 3001.

NUR 3005 - Emergency Preparedness (3)
Focuses on the nurse's roles and responsibilities in the most common types of disasters and how the nurse can deliver effective care in various emergency situations.

Prerequisite: NUR 3001.

NUR 3006 - Gerontology Nursing (3)
Focuses on optimizing health for the aging client within the framework of the nursing process. Emphasis is on supporting the unique needs of the aging population.

Prerequisite: NUR 3001.

NUR 3007 - Behavioral Health (3)
Provides an overview of behavioral health promotion for individuals, families, and populations with behavioral health concerns. The focus of the course will explore the nurse's impact on behavioral health trends.

Prerequisite: NUR 3001.

NUR 4008 - Legal and Ethical Issues (3)
Emphasizes the ethical and legal obligations of professional nursing practice. The focus is on values clarification, ethical theory, and ethical decision-making models. Additionally, legal issues related to healthcare will be explored.

Prerequisite: NUR 3001.

NUR 4009 - Leadership in the Nursing Profession (3.5)
Focuses on the role of the professional nurse as a leader within healthcare. The course integrates concepts needed to assume leadership and management positions in the healthcare environment.

Prerequisite: NUR 3001.

NUR 4010 - Community Health Nursing Practicum (6)
Focuses on the role of the professional nurse in community-based practice settings, with an emphasis placed on health promotion, prevention, and optimal wellness of the community.

Prerequisite: NUR 3001.

NUR 4011 - Senior Seminar (3)
Integrates theory into practice by building on previous concepts and knowledge.

Prerequisite: NUR 3001.

OSH - Occupational Safety Technician

OSH 1310 - 10-HR Construction Industry Standards (1)
Provides a 10-Hour Occupational Safety and Health Administration (OSHA) certification course for the construction industry and participants will review the current OSHA standards contained in 29 Code of Federal Regulations (CFR) 1926. Participants that complete the course will receive a certificate of completion from the United States Department of Labor, Occupational Safety and Health Administration. The course is taught by instructors certified by the Occupational Safety and Health Administration.

OTE - Optics Technology

OTE 1000 - Fundamentals of Light & Lasers (4)
Introduces the fundamentals of light, optics and lasers. This course covers the nature and properties of light (such as energy,

amplitude, wavelength, frequency, period, phase, propagation). This course also addresses geometrical optics (reflection, refraction, imaging, thin lens formula, lens maker's equation), wave optics (interference, diffraction, polarization), and the basic principles and practical applications of lasers.

Prerequisite: OTE 1001 and OTE 1003.

OTE 1001 - Quality Assurance of Precision Optics (3)
Introduces precision optics fabrication, as well as quality assurance practices required to identify, inspect, and measure optical components. Hands-on labs will provide the opportunity to apply concepts covered in the course.

Prerequisite: Prerequisite/Corequisite: MAT 1150 or MAT 1420 or MAT 1440 or higher.

OTE 1002 - Intro to Manufacturing Technology (3)
Evaluates topics and practices central to the optics manufacturing industry. This course covers major topics in optics manufacturing technology including reading optical engineering drawings/prints, lean manufacturing, statistical process control, and geometric dimensioning and tolerancing for optics, focusing on the unique practices and toolsets within each.

OTE 1003 - Laboratory Operations (3)
Evaluates topics and practices central to working in laboratory and cleanroom environments within the optics manufacturing industry, with emphasis on manufacturing, integration, and testing. Major topics include lab safety, lab organization and operations, and laboratory soft skills. Specific subjects within each of these topics are examined independently, focusing on the unique practices and toolsets within each and their applicability to lab operations in optics manufacturing.

OTE 1004 - Optics: Electronic Instrumentation (3)
Introduces the basic electronic instrumentation skills needed when working in optics and photonics labs and related fields. Covers the basic components used in AC and DC electronics, optical detectors and photonic 'circuits', common instruments and interfaces used in test and troubleshooting of photonic systems, and basic data analysis tools and techniques.

Prerequisite: Prerequisite/Corequisite: MAT 1150 or MAT 1420 or MAT 1440 or higher and OTE 1003.

OTE 1005 - Fabrication Methods for Precision Optics (4)
Provides a basic understanding of the methodology and processes used in the fabrication of precision optical elements. Emphasis is placed on the selection and use of tooling, materials and equipment used in the manufacturing process with specific examples.

OTE 1030 - Metrology of Optical Systems (3)
Provides students with a basic understanding of the optical system measurement and testing techniques used to determine overall quality of an optical system's performance. It presents a comprehensive review of measurement practices essential to ensuring the quality of optical systems.

Prerequisite: OTE 1001.

OTE 1060 - Advanced Topics in Optics & Photonics (3)
Provides an understanding of thin film optical coatings and fiber optics. Topics include the theory of propagation of light through optical thin films, use of modern design tools, overview of manufacturing techniques, instrumentation, technologies and equipment for thin film deposition, applications of thin film optical coatings, the theory of propagation of light through optical fibers, applications of fiber optics, handling of optical fiber and fiber components, and basic manufacturing concepts for fiber optics and components.

Prerequisite: OTE 1001 and OTE 1003.

OTE 2000 - Laser Systems and Applications (4)
Expands on laser technology by examining laser mechanisms, output characteristics, types, and applications, including both solid-state and fiber lasers.

Prerequisite: OTE 1000 and OTE 1004.

OTE 2004 - Optical Devices and Systems (4)
Covers how light is used to transmit digital information, combining and expanding the knowledge of fundamentals of light and lasers and electronic instrumentation. This course emphasizes an awareness of, and basic knowledge about, important technologies and applications in modern photonics industry including detectors, image display, integrated optics, and optical systems combining sources and detectors.

Prerequisite: OTE 1000 and OTE 1004.

OTE 2005 - Adv Fabrication Precision Optics (4)
Covers current processes, machinery and tools employing computer numerical control (CNC) technology that are shaping the manufacture of optical components. This course covers laboratory experience and familiarity with CNC grinding and polishing, planetary grinding and polishing, and tolerancing and metrology.

Prerequisite: OTE 1005.

OTE 2079 - Optics Technology Workshop (1)
Provides opportunities for presenting themes and concepts, or the development of a skill related to the course of study. Workshops emphasize experiential learning.

OTE 2081 - Optics Technology Internship (2)
To be determined by the individual instructor. A list of outcomes will be developed for each course and documented within the course syllabus.

OTE 2089 - Optics Technology Capstone (2)
To be determined by the individual instructor. A list of outcomes will be developed for each course and documented within the course syllabus.

OUT - Outdoor Studies

OUT 1040 - Outdoor Sports Conditioning (1)
Introduces the student to an outdoor sports conditioning program that builds on strength, flexibility, agility and stamina for the student planning to participate in any outdoor activity. Various exercises and techniques will be demonstrated and will concentrate on all muscle groups for strength, and cardiovascular emphasis for aerobic fitness. Outdoor as well as indoor training programs will be utilized.

OUT 1100 - 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.

OUT 1120 - 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.

OUT 1160 - 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.

OUT 1250 - Survival Plants in Summer I (2)
Introduces the student to the summer season genus and species recognition of wild useful plants (edible, medicinal, poisonous and tool-craft) in all life zone categories (alpine subalpine, montane, foothill and desert) of Colorado. Other topics covered will be summertime identification challenges, macro and micro environments, and dangerous lookalikes, and soils, latitudinal and elevational effects. Note: The Survival Plant series of classes can be taken in any order because each course academia is seasonal specific not nomenclature specific.

OUT 1255 - Survival Plants in the Fall (2)
Introduces the student to the fall season genus and species recognition of wild useful plants (edible, medicinal, poisonous and tool-craft) in all life zone categories (alpine subalpine, montane, foothill and desert) of Colorado. Other topics covered will be wilderness survival as it relates to wild useful botany, definition of a "weed", natives vs. non-natives, parasites and saprophytes, poisoning and habitat synergy. Note: The Survival Plant series of classes can be taken in any order because each course academia is seasonal specific not nomenclature specific.

OUT 1260 - Survival Plants in Spring I (2)
Introduces the student to spring season genus and species recognition of wild useful plants (edible, medicinal, poisonous and tool-craft) in all life zone categories (alpine subalpine, montane, foothill and desert) of Colorado. Other topics covered will be early ethno botany, botanical nomenclature, annuals, biennials and perennials, harvesting ethic, rare plants and seasonal changes. Note: The Survival Plant series of classes can be taken in any order because each course academia is seasonal specific not nomenclature specific.

OUT 1385 - Scuba Diving (1)
Provides basic instruction in scuba diving. Focuses on the knowledge and skills related to swimming and snorkeling, diving equipment, communications, the environment, safety, dive tables, and other pertinent information a student needs for safe scuba diving. This course prepares the student for open-water professional certification.

OUT 1390 - Assistant Scuba Instructor (3)
Introduces the student to the skills needed to teach scuba diving. The classroom sessions start to develop the student's ability to set up teaching presentations, confined water presentations, open water presentations, standards and procedures for conducting Scuba diving courses and marketing of scuba to the general public. The pool sessions fine tune the student's ability to teach skills and demonstrate skills to training divers. The open water sessions show students how to evaluate divers' skills in a real-world environment.

Prerequisite: OUT 2005 or instructor approval.

OUT 1510 - 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.

OUT 1600 - Winter Wilderness Survival Skills (2)
Emphasizes winter survival techniques in the nivean environment at or near timberline. Focuses on winter ecology, basic snow science, and avalanche safety and rescue in a backcountry setting. This course includes field days and an overnight in a snowcave.

OUT 1651 - Snowshoeing (1)
Emphasizes the basic skills, equipment, clothing and techniques of snowshoeing. It includes the objective dangers involved with winter recreation.

OUT 1670 - Avalanche Safety I (1)
Introduces the latest terms, technology and practices in the field of avalanche safety. Topics discussed include different types of avalanches, avalanche terrain, avalanche rescue, trip planning and gathering field observations. Emphasis is placed on using the avalanche bulletin to make sound terrain decisions. This course meets the American Avalanche Association Recreational Level 1 Avalanche Course guidelines.

OUT 2002 - 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) or Scuba Schools International (SSI).

Prerequisite: OUT 1385.

OUT 2003 - Advanced Open Water Diver (2)
Extends the student's prior knowledge of diving by introducing them to advanced techniques including: deep diving, underwater navigation, night diving, peak performance buoyancy and multilevel diving. The classroom focuses on developing the student's knowledge, while the pool sessions focus on further developing the student's underwater skills. The open water training dives focus on improving the student's diving skills as well as introducing the student to the different types of dives available.

Prerequisite: OUT 2002 or instructor approval.

OUT 2005 - Divemaster (3)
Introduces the student to leadership level diving. It trains the student in several areas of focus: dive theory, waterman ship skills, problem solving abilities, role model behavior, student diver management and certified diver management. These skills are learned in both pool and classroom sessions. The practical application phase teaches the student how to deal with student divers as well as certified divers in a leadership role.

Prerequisite: OUT 2300 or instructor approval.

OUT 2033 - Winter Survival Fire Building (1)
Provides instruction and hands-on practice in fire construction in a wilderness survival related context. Emphasis will be on safety, understanding principles of fire, and experiencing “hands-on” practice in fire building techniques using multiple man made and primitive (natural) fire starters and tinders.

OUT 2043 - Wilderness First Aid (1)
Introduces wilderness medicine and basic life support skills. This course focuses on prevention, assessment, and treatment of environmental illnesses. Recognizing and stabilizing life threats caused from trauma, calling for a rescue, and organizing an evacuation in the event of a wilderness emergency are also covered.

OUT 2044 - Wilderness First Responder (4)
Focuses on the prevention, assessment, and treatment of injuries and illnesses common to backcountry travel as well as how to manage a rescue. The course introduces patient assessment, standards of care, team dynamics, and critical thinking used during wilderness emergencies. This course is intended for outdoor enthusiasts and professionals who travel, recreate, and work in remote environments.

OUT 2300 - Rescue Diver (2)
Introduces the student to being able to help others in a rescue scenario. Teaches the student how to recognize problems at all stages in the rescue process. The classroom sessions focus on theories including stress management. The pool sessions focus on the practical application of assisting divers in trouble. The open water sessions focus on realistic situations. This fine-tunes the student's ability to handle different situations and prepares the student for the Divemaster course.

Prerequisite: OUT 2003.

OUT 2510 - 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.

Prerequisite: OUT 1510.

PAR - Paralegal

PAR 1115 - 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.

PAR 1116 - Torts (3)
Focuses on tort law, including negligence, intentional torts, and strict liability with an emphasis on personal injury litigation.

PAR 1117 - Family Law (3)
Emphasizes domestic law, common property, dissolutions, adoptions, legal separation, and other family law issues.

PAR 1118 - Contracts (3)
Examines the basic principles of contract law.

PAR 1125 - Property Law (3)
Focuses on real estate law, ownership, sale, leasing, financing and government regulation of land.

PAR 1126 - Administrative Law (3)
Introduces administrative and regulatory agencies, their jurisdiction, rule-making and decision-making processes.

Prerequisite: PAR 1115.

PAR 1127 - Legal Ethics (3)
Explores the parameters of professional responsibilities and value systems for paralegals and related occupations.

PAR 2080 - Internship (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

PAR 2087 - Cooperative Education (3)
Provides students an opportunity to gain practical experience in applying their occupational skills and/or to develop specific skills in a practical work setting. The instructor will work with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the employer or work site supervisor.

PAR 2089 - Capstone (3)
Emphasizes a synthesis of the information and skills that students learned throughout their paralegal studies.

PAR 2201 - Civil Litigation (3)
Focuses on an intensive study of the legal process including the Federal and Colorado Rules of Civil Procedure.

PAR 2202 - Evidence (3)
Introduces the student to State and Federal Rules of Evidence and application to the trial process.

Prerequisite: PAR 1115.

PAR 2205 - Criminal Law (3)
Introduces basic concepts of criminal law and criminal procedure, including Colorado statutes and Rules of Procedure.

Prerequisite: PAR 1115.

PAR 2206 - Business Organizations (3)
Focuses on the study of the major types of business organizations.

Prerequisite: PAR 1115.

PAR 2208 - Probate and Estates (3)
Provides an understanding of the creation and administration of an estate, including wills and trusts and the probate process.

Prerequisite: PAR 1115.

PAR 2209 - Constitutional Law (3)
Emphasizes the study of the powers of government as they are allocated and defined by the United States Constitution.

PAR 2211 - Legal Research (3)
Introduces the student to basic legal research tools, including statutes, digests, case law, citations, encyclopedias, dictionaries, and online data bases.

Prerequisite: PAR 1115.

PAR 2212 - Legal Writing (3)
Enables the student to practice the content and conventions of legal writing.

Prerequisite: ENG 1021 and PAR 1115 and. Corequisite: Prerequisite/Corequisite: PAR 2211.

PAR 2215 - Alternative Dispute Resolution (3)
Introduces the student to negotiating, mediation, arbitration and other forms of dispute resolution.

PAR 2216 - Employment Law (3)
Provides an understanding of current legal issues in the area of employer/employee relationships.

Prerequisite: PAR 1115.

PAR 2217 - Environmental Law (3)
Covers state and federal laws concerning the environment, including chemical safety laws, workplace safety, and hazardous waste.

PAR 2218 - Bankruptcy Law (3)
Focuses on the federal and state laws and procedures involving bankruptcy.

Prerequisite: PAR 1115.

PAR 2219 - E-Discovery & Litigation Technology (3)
Provides students with an understanding of the discovery process of electronically stored information (ESI) issues and software relating to complex litigation.

Prerequisite: Prerequisite/Corequisite: PAR 2201. This course and PAR 2201 may be taken at the same time.

PAR 2227 - Immigration Law (3)
Provides an understanding of the United States Immigration Laws.

PAR 2228 - Intellectual Property (3)
Covers the federal and state laws regarding intellectual property.

PED - Physical Education

PED 1001 - 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.

PED 1002 - Weight Training I (1)
Offers basic instruction and practice in weight training. Students utilize weight-training equipment in accordance to their abilities and goals. Emphasizes weight training equipment orientation, correct lifting techniques, and basic program design for men and women.

PED 1003 - Weight Training II (2)
Offers guided instruction and independent practice in weight training for men and women. Students practice various weight-training techniques in accordance with their abilities. Emphasizes physiological considerations, equipment orientation, correct lifting techniques, program design, and nutrition.

PED 1004 - 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.

PED 1012 - Fitness Center Activity III (1)
Serves as an advanced exercise course designed for individuals interested in attaining a high level of total fitness. Includes an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. Focuses on the basic components of fitness including flexibility, muscular strength and endurance, cardiovascular fitness, and body composition. The primary mode of training is Aerobic Circuit Training. The circuit training is supplemented with additional work on specialized weight machines, dumbbells, treadmills, rowers, stair climbers, cross trainers, Nordic track, versa climbers, and running track available in the Fitness Center.

PED 1022 - 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.

PED 1029 - Zumba (1)
Zumba is a compilation of high energy, motivating music with unique moves and choreography combinations. Zumba fuses Latin and international music and dance themes to create a dynamic, exciting, effective fitness system. The routines feature aerobic/fitness interval training with a combination of fast and slow rhythms that tone and sculpt the body. Zumba utilizes the principles of fitness interval training and resistance training to maximize caloric output, fat burning and total body toning. It is a mixture of body sculpting movements with easy to follow dance steps.

PED 1040 - Body Sculpting & 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.

PED 1043 - Yoga I (1)
Offers a guided instruction in yoga. Students practice yoga according to their individual fitness levels and abilities. Emphasizes enhancing general health and well-being through the performance of yoga strength, flexibility, balance and relaxation techniques and exercises.

PED 1044 - Yoga II (1)
Continues to build on the concepts of basic yoga. Increases awareness of yoga including physical and mental benefits.

PED 1051 - Walking and Jogging (1)
Enables the student to understand the values in walking and jogging. Safety precautions and emphasis on personal programs are emphasized.

PED 1052 - Stretch 'N Relax (1)
Teaches proper stretching techniques to all parts of the body.

PED 1061 - 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.

PED 2011 - 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.

PED 2030 - Volleyball I (1)
Introduces and improves student skill level in volleyball. The primary emphasis is on teaching the student the elements of volleyball including rules, offensive and defensive play, passing, serving, setting, attacking, team play and game strategies.

PED 2034 - 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.

PHI - Philosophy

PHI 1011 - Introduction to Philosophy: GT-AH3 (3)
Introduces significant theoretical and practical questions and emphasizes understanding the meaning and methods of philosophy. Includes: the human condition, logic, reality, knowledge, freedom, history, ethics, and religion.

Offered: *(GT-AH3).

PHI 1012 - Ethics: GT-AH3 (3)
Examines human life, experience, and thought in order to discover and develop the principles and values for pursuing a more fulfilled existence. Theories designed to justify ethical judgments are applied to a selection of contemporary personal and social issues.

Offered: *(GT-AH3).

PHI 1013 - Logic: GT-AH3 (3)
Studies effective thinking using language-oriented logic. Provides tools and develops skills for creative and critical thinking and the formal analysis of arguments. Emphasizes the development of decision-making and problem-solving. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Offered: *(GT-AH3).

PHI 1014 - Comparative Religions: GT-AH3 (3)
Introduces the major religions of the Eastern and Western world. Covers Hinduism, Buddhism, Confucianism, Daoism, Judaism, Christianity, and Islam. Utilizes methods of religious studies to understand the historical development of each religious tradition as well its worldview and teachings. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Offered: *(GT-AH3).

PHI 1015 - World Religions - West: GT-AH3 (3)
Introduces students to religions of the Western World: Judaism, Christianity, and Islam. Utilizes the methods of religious studies to understand the historical development of each religious tradition in terms of communities, cultural context, and modern manifestations; paying particular attention to differences between sects, denominations, schools, and factions within each tradition. Focus will include the examination of the charismatic leaders, prophets, and narratives that inform the worldview of each tradition. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Offered: *(GT-AH3).

PHI 1016 - World Religions - East: GT-AH3 (3)
Introduces the major religions of the Eastern World: Hinduism, Buddhism, Confucianism, and Daoism. Utilizes the methods of religious studies to understand the historical development of each religious tradition in terms of communities, cultural context, and modern manifestations; paying particular attention to differences between sects, denominations, schools, and factions within each tradition. Focus will include the examination of the charismatic leaders, prophets, and narratives that inform the worldview of each tradition. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Offered: *(GT-AH3).

PHI 1042 - New Testament (3)
This course surveys the literature of the early Christian era, from its inception to approximately 150 C.E. The New Testament as well as selected non-canonical writings from the period are examined. The course focuses on the interpretation of these texts in light of the cultural milieu from which they arose. Particular attention is paid to the influence of ancient literary conventions upon the Christian writers of this time.

PHI 2001 - Social & 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.

PHI 2003 - Introduction to Buddhism (3)
Introduces students to the history, philosophy and practices of the Buddhist tradition. This course in no way intends to be comprehensive but rather surveys the many manifestations of Buddhism through an exploration of foundational aspects, the evolution and spread of Buddhist philosophical and spiritual ideals, and aspects of Buddhism as it exists in the modern world.

PHI 2005 - Business Ethics: GT-AH3 (3)
Examines major ethical theories and then applies ethical decision-making criteria to various moral issues and challenges in a business environment. This course will include issues such as job discrimination, worker’s rights, consumerism, advertising, whistle-blowing, product safety, responsibility to the environment, as well as compassionate and fair responsibility to society. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Offered: *(GT-AH3).

PHI 2013 - Symbolic Logic: GT-AH3 (3)
Covers basic information in semantics and syntax of sentential and predicate logic, construction of truth trees and derivations of natural deductive systems.

Offered: *(GT-AH3).

PHI 2014 - Philosophy of Religion: GT-AH3 (3)
Focuses on the critical examination of the fundamental concepts, ideas, and implications of religion. Includes the nature of God, the varieties of religious experience, argument concerning God`s existence, the Problem of Evil, faith and reason, religion and human destiny, and the connection

between religion and ethics. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Offered: *(GT-AH3).

PHI 2015 - The Meaning of Life (3)
Examines theistic and non-theistic, subjective and objective approaches to the question: What is the meaning of life? Additionally, the question itself is dissected, as students are challenged to understand what is really being sought and how to begin formulating an answer.

PHI 2018 - Environmental Ethics: GT-AH3 (3)
Analyzes theories of the value of the natural world. Topics may 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; and the connection between moral and political values and economic policies. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Offered: *(GT-AH3).

PHI 2020 - Philosophy Death & Dying: GT-AH3 (3)
Explores the major philosophical questions surrounding death and dying, the metaphysical arguments for and against the existence of the soul, life after bodily death, the major ethical theories and their relation to issues of physician-assisted suicide, care for the dying, the grieving process, death as expressed in aesthetics and contemporary society, as well as the existential contributions concerning meaning of life and the meaning of death. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Offered: *(GT-AH3).

PHT - Pharmacy Technician

PHT 1012 - Pharmacy Law and Ethics (2)
Introduces the laws, regulations and agencies that pertain to pharmacy practice and the role that technicians play to ensure compliance. Establishes a foundation of ethical behavior and decision making and discusses the consequences of violating laws and ethical principles.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. .

PHT 1015 - Pharmacology I (3)
Presents the fundamentals of pharmacology, the pharmacokinetic phases, and the basic concepts of normal body function. This course examines diseases which impact the various body systems and the drugs used to treat such diseases, emphasizing disease state management and drug therapy.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. .

PHT 1016 - Pharmacology II (3)
Examines the disease states which impact the various body systems and the drugs used to treat such diseases. This course emphasizes disease state management and drug therapy. Serves as the second part of the two-part presentation of the basic concepts of pharmacology.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. .

PHT 1035 - Pharmaceutical Calculations & Compounding Techniques (4)
Develops the skills necessary to perform calculations essential to the duties of pharmacy technicians in a variety of contemporary settings. This course also applies these skills in hands-on compounding of pharmaceutical products emphasizing the importance of accuracy, quality and infection control.

Prerequisite: College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher.

PHT 1040 - Institutional Pharmacy (3)
Explores the role of pharmacy technicians and the practice of pharmacy in the institutional setting. This course covers institutional and pharmacy organization, terminology, medication distribution systems, packaging and preparation of intravenous admixtures. This course includes a hands-on simulation component in preparation for institutional practice.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher.

PHT 1041 - Community Pharmacy (3)
Provides a basic understanding of both general and specific tasks and responsibilities involved in the practice of pharmacy in a community setting. Emphasizes chain and independent community pharmacy practices and other related practice settings (such as consultant pharmacy, mail order pharmacy and nuclear pharmacy). Enables the student to obtain hands-on experience in the important technical duties of dispensing and compounding. Utilizes a lecture-informal discussion format combined with a series of practice skills laboratory sessions.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher.

PHT 1070 - Pharmacy Clinical: Institutional (4)
Provides an opportunity for the completion of practical work experience related to the educational program.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher.

PHT 1071 - Pharmacy Clinical: Community (4)
Provides an opportunity for the completion of practical work experience related to the educational program.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher.

PHT 2050 - Sterile Compounding & Aseptic Technique (2)
Provides overview of methods and regulation of sterile products as well as instruction and training for the mastery of aseptic technique and the successful production of sterile preparations. This course prepares students for passing process validation checklists and provides comprehensive coverage of all procedures and techniques related to the skill sets necessary for sterile compounding.

Prerequisite: PHT 1040.

PHY - Physics

PHY 1105 - Conceptual Physics w/Lab: GT-SC1 (4)
Focuses on mechanics, heat, properties of matter, electricity and magnetism, and light. Incorporates laboratory experience. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC1).

PHY 1107 - Energy Science & Tech w/Lab: GT-SC1 (4)
Explores the science of energy and energy technologies with a focus on renewable energy resources and clean technologies. The course provides a background in the physics of energy, energy transfer, and the current state of energy technology. Evaluation of the future utilization of renewable technologies is included. Topics may include conservation of energy; mechanical, electrical, heat, and fluid power systems; energy transfer and loss; energy audits; and testing solar collectors and wind generators. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Offered: *(GT-SC1).

PHY 1111 - Physics: Algebra-Based I w/Lab: GT-SC1 (5)
Covers the physics of mechanics and requires application of classical physics to both mathematical and conceptual problems. Major topics include kinematics in one and two dimensions, Newton’s Laws, circular motion, work and energy, impulse and momentum, and rotational mechanics. This course may also include topics relating to simple harmonic motion and traveling and standing waves. This is a statewide Guaranteed Transfer course in the GT-SCI category.

Prerequisite: MAT 1340. Offered: *(GT-SC1).

PHY 1112 - Physics: Algebra-Based II w/Lab: GT-SC1 (5)
Covers the physics of electricity and magnetism and requires application of classical physics to both mathematical and conceptual problems. DC circuits involving resistors, capacitors, and batteries will be covered. Also covered are electromagnetic waves and geometric optics. This course may also include topics relating to simple harmonic motion, traveling and standing waves, and AC circuits. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: PHY 1111. Offered: *(GT-SC1).

PHY 2111 - Physics: Calculus-Based I w/Lab: GT-SC1 (5)
Covers the physics of kinematics, dynamics, and conservation laws and requires application of classical physics to both mathematical and conceptual problems. Specific concepts covered include 1D and 2D kinematics, Newton’s Laws, rotational motion, energy and work, momentum and impulse, and simple harmonic motion. This course may also cover thermodynamics and fluid mechanics. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: MAT 2410. Offered: *(GT-SC1).

PHY 2112 - Physics: Calculus-Based II w/Lab: GT-SC1 (5)
Covers the physics of electricity and magnetism using conceptual and mathematical reasoning, including calculus. Maxwell's equations, waves, and time-varying circuits will be covered. Optional topics include wave and geometric optics and AC circuits. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: PHY 2111. Offered: *(GT-SC1).

PHY 2113 - Physics III: Calculus-Based Modern (3)
Expands upon PHY 2112 and explores twentieth century advances in physics. Topics may include special and general relativity, quantum theory, atomic physics, solid state physics, nuclear physics, semiconductor physics, and cosmology.

Prerequisite: PHY 2112.

PSC - Political Science

PSC 1011 - American Government: GT-SS1 (3)
Includes the background of the U.S. Constitution, the philosophy of American government, general principles of the Constitution, federalism, and civil liberties. Examines public opinion and citizen participation, political parties, interest groups, electoral process, and the structure and functions of the national government. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

PSC 1025 - American State & Local Govt: GT-SS1 (3)
Emphasizes the structure and function of state, county, and municipal governments including their relations with each other and with national government. Includes a study of Colorado government and politics. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

PSC 1050 - Current Political Issues: GT-SS1 (3)
Incorporates an in-depth analysis of the background and nature of political issues and themes. This course is statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

PSC 2005 - International Relations: GT-SS1 (3)
Examines the interactions among various levels of actors in the international system. This course attempts to explain behaviors across state boundaries. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

PSC 2020 - Intro to Political Science: GT-SS1 (3)
Focuses on a survey of the discipline of political science, including political philosophy and ideology, democratic and non-democratic governments and processes, and international relations. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

PSC 2025 - Comparative Government: GT-SS1 (3)
Examines domestic political systems, developments, themes, and events across countries and regions while applying the comparative method to identify similarities and differences. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Offered: *(GT-SS1).

PSY - Psychology

PSY 1001 - General Psychology I: GT-SS3 (3)
Focuses on the scientific study of behavior including motivation, emotion, physiological psychology, stress and coping, research methods, consciousness, sensation, perception, learning and memory.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

PSY 1002 - General Psychology II: GT-SS3 (3)
Focuses on the scientific study of behavior including cognition, language, intelligence, psychological assessment, personality, abnormal psychology, therapy, life span development, sex, gender, sexuality, and social psychology. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

PSY 1016 - 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.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher.

PSY 2000 - Research Methodology (4)
Introduces research methods and designs including correlational studies, experimental designs and quasi-experimental designs. Additional topics include evaluations of scientific research, data analysis, report writing and research ethics.

Prerequisite: PSY 1001.

PSY 2105 - Psychology of Gender: GT-SS3 (3)
Examines gender comparisons in work, courtship, family life, and sexual behavior throughout the life span. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

PSY 2107 - Human Sexuality: GT-SS3 (3)
Surveys physiological, psychological, and psychosocial aspects of human sexuality. Topics include relationships, sexual identity, and sexual health. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

PSY 2221 - Social Psychology: GT-SS3 (3)
Focuses on the behavior of humans in a wide variety of social settings and the social influences humans have on each other in those settings. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

PSY 2222 - Psychology of Death & Dying: GT-SS3 (3)
Examines the philosophies of life and death emphasizing dying, death, mourning and the consideration of one's own death. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

PSY 2440 - Human Growth & Development: GT-SS3 (3)
Examines human development from conception through death, emphasizing physical, cognitive, emotional, and psychosocial factors. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

PSY 2441 - Child Development: GT-SS3 (3)
Focuses on the growth and development of the individual, from conception through childhood, emphasizing physical, cognitive, emotional, and psychosocial factors. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

PSY 2443 - Adolescent & Adult Psychology (3)
Examines growth and development of the individual from adolescence to death, emphasizing physical, cognitive, emotional and psychosocial factors.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher.

PSY 2552 - Abnormal Psychology: GT-SS3 (3)
Examines abnormal behavior and its classifications, causes, treatment and prevention.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

PSY 2662 - Intro to Neuropsychology (3)
Focuses on introduction to basic neuropsychological terms and concepts with emphasis on application of thinking and behavior in humans.

Prerequisite: PSY 1001 or PSY 1002.

PSY 2770 - Intro to Forensic Psychology (3)
Provides an overview of forensic psychology. This course explores both current research and practice in police psychology, criminal psychology, victimology, correctional psychology, and the interface of psychology and the courts. This course facilitates an understanding of the numerous careers related to forensic psychology and how to prepare for them.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher.

PSY 2771 - Psychology of Personality: GT-SS3 (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 subfield of psychology. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

REC - Recreation

REC 2010 - Principles of Outdoor Recreation (3)
Includes lecture and practical outdoor experience relating to problems and trends in outdoor recreation.

REC 2011 - Outdoor Leadership (2)
Introduces the development, acquisition, and application of outdoor leadership skills and knowledge. Focuses on the latest information philosophy, and techniques necessary to safely conduct outdoor programs and expeditions as an outdoor leader. Skills are applied under actual field conditions. Emphasizes minimal impact camping, wilderness ecology, judgment and decision making, group dynamics and trip logistics. These skills enhance effectiveness as an outdoor leader.

REC 2012 - 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.

Prerequisite: Prerequisite/Corequisite: REC 2010.

RUS - Russian

RUS 1001 - 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.

RUS 1002 - Conversational Russian II (3)
Continues the sequence for students who wish to understand and speak Russian. Covers basic conversational patterns, expressions, and grammar.

Prerequisite: RUS 1001.

RUS 1011 - Russian Language I (5)
Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading, and writing the Russian language. Note: The order of the topics and methodology will vary according to individual texts and instructors.

RUS 1012 - Russian Language II (5)
Continues Russian I in the development of functional proficiency in listening, speaking, reading, and writing the Russian language. Note: The order of the topics and methodology will vary according to individual texts and instructors.

Prerequisite: RUS 1011 or appropriate placement score.

RUS 2001 - 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.

Prerequisite: RUS 1002.

RUS 2002 - 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.

Prerequisite: RUS 2001.

RUS 2011 - Russian Language III: GT-AH4 (3)
Continues Russian Language II in the development of increased functional proficiency at the intermediate level in speaking, aural comprehension, reading, writing, and cultural competency in the Russian language. This course is conducted predominantly in Russian. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: RUS 1012. Offered: *(GT-AH4).

RUS 2012 - Russian Language IV: GT-AH4 (3)
Continues Russian Language III in the development of increased functional proficiency at intermediate mid-level in speaking, aural comprehension, reading, writing, and cultural competency in the Russian language. This course is conducted predominantly in Russian. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: RUS 2011. Offered: *(GT-AH4).

SCI - Science

SCI 1055 - Integrated Science I w/Lab: GT-SC1 (4)
Examines the nature of energy and matter, their interactions and changes, and the application of fundamental concepts to the study of our natural world. These concepts will be explored in hands-on laboratory experiments. This course integrates the fundamental concepts and ideas about the nature of physics and chemistry with the natural world.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 1150 or higher. Offered: *(GT-SC1).

SCI 1056 - Integrated Science II w/Lab: GT-SC1 (4)
Examines earth and biological systems, living and non-living environments, through the application of fundamental energy and matter concepts. These systems and concepts will be explored in hands-on laboratory experiments.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 1150 or higher. Offered: *(GT-SC1) .

SCI 1105 - Science in Society: GT-SC2 (3)
Examines issues relating to the way science interacts with society. A selection of issues from information technology, the environment and earth science, physics and astronomy, biology, medicine, and the interaction of science with politics will be examined, as informed by current events. Emphasis will be on research, inquiry, and critical analysis of science-related issues,

including the negative and positive roles of science in society. This is a statewide Guaranteed Transfer course in the GT-SC2 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. College Math Readiness: Equivalent testing score or enrollment in or completion of MAT 0250 or higher. Offered: *(GT-SC2) .

SOC - Sociology

SOC 1001 - Intro to Sociology I: GT-SS3 (3)
This course examines the basic concepts, theories, and principles of sociology, including topics of culture, race, class, gender, sexuality, social groups, and deviance through a local and global lens. Analyzes and interprets socio-historic as well as contemporary issues by using critical thinking skills and linking individual experiences to social structures. (GT-SS3)

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 1002 - Intro to Sociology II: GT-SS3 (3)
Examines the basic concepts, theories, and principles of sociology, including topics of family, religion, education, politics, the economy, health, demography, the environment and social movements through a local and global lens. Analyzes and interprets socio-historical as well as contemporary issues by using critical thinking skills and linking individual experiences to social structures. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 2005 - Sociology of Family Dynamics: GT-SS3 (3)
Offers a critical exploration of marriage, family and kinship. It examines the family as an institution and how social, cultural and personal factors influence family relations locally and globally. Explores the stability and evolution of the family, along with current trends and a range of family forms. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 2007 - Environmental Sociology: GT-SS3 (3)
Examines how humans' relationship with the environment is mediated by social stratification. Key topic areas include industrial and economic growth versus sustainability, natural resources development and management, cultural values, social movements, and comparative perspectives on people's relationship to the environment.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 2008 - Restorative Justice I (3)
Provides an introduction to the fundamental principles, practices, and goals of restorative justice. Examines various restorative justice models within different institutional and communal settings in the U.S and globally. Addresses the role of key stakeholders, differentiate between retributive and restorative paradigms, and identify restorative justice limitations.

SOC 2015 - Contemporary Social Problems: GT-SS3 (3)
Investigates current social issues that result in societal problems. Focuses on numerous areas including, but not limited to, the loss of civil liberties, concentration of media ownership, gender discrimination, hate crimes, poverty, hunger, environmental degradation, racism and prejudice, as well as social change. Addresses ways to ameliorate these social ills.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 2016 - Sociology of Gender: GT-SS3 (3)
Examines major trends and theoretical approaches within the field of sociology of gender including the impact of intersecting social markers such as race, class, sexuality and gender identities. Addresses gender performance, stratification and inequalities in micro and macro settings in the U.S. Focuses on social movements relating to identities and institutional inequalities. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 2018 - Sociology of Diversity: GT-SS3 (3)
Explores differences based on race, ethnicity, social class, gender, age, ability status, and sexual identity. Critically examines the dynamics of intergroup relations and how social construction of these differences can lead to patterns of prejudice, discrimination, and inequality nationally and globally.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 2020 - Sociology of Religion: GT-SS3 (3)
Further explores the study of the sociology of religion. Analyzes the socially constructed definition of religion, the forms religion takes in various societies, the impact religion has on local and global societies and social institutions and the many ways in which people shape, maintain or disassemble religious structures. This course is one of the Statewide Guaranteed Transfer courses.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 2031 - Sociology of Deviant Behavior: GT-SS3 (3)
Critically examines various deviant categories and societal reactions to deviance affecting diverse populations. Examines how sociologists study deviance and the theories they use to explain it. Explains the ways social institutions define deviance and attempt to control, change, or treat those deviant behaviors, attitudes, and conditions.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 2037 - Sociology of Death & Dying: GT-SS3 (3)
Explores the socially constructed nature of how individuals and societies interact with death and dying. Examines how individuals experience death and dying based on their social location. Analyzes diversity in grief practices related to death.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

SOC 2065 - Violence and Culture (3)
Examines the concepts, relationships, organizations, and research as they relate to violence in multiple cultural settings. Assists in developing an understanding of societal and institutional causes of violence and explores resources for intervention and treatment.

SPA - Spanish

SPA 1001 - 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.

SPA 1002 - 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.

Prerequisite: SPA 1001.

SPA 1011 - Spanish Language I (5)
Develops students' interpretive, interpersonal, and presentational communicative abilities in the language. Integrates these skills in the cultural contexts in which the language is used. Offers a foundation in the analysis of culture.

SPA 1012 - Spanish Language II (5)
Expands students' interpretive, interpersonal, and presentational communicative abilities in the language across the disciplines. Integrates these skills with the study of the cultures in which the language is used. Offers a foundation in the analysis of culture and develops intercultural communicative strategies.

Prerequisite: SPA 1011 or appropriate placement score.

SPA 1014 - 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.

SPA 1015 - Spanish for the Professional I (3)
Introduces students 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.

SPA 1094 - Service Learning (1-12)
Allows the student to provide a service to the community utilizing knowledge and skills acquired from a course in which the student is currently enrolled or has previously taken at the student's respective college.

SPA 2001 - 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.

Prerequisite: SPA 1002.

SPA 2002 - 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.

Prerequisite: SPA 2001.

SPA 2011 - Spanish Language III: GT-AH4 (3)
Continues Spanish Language II in the development of increased functional proficiency at the intermediate level in speaking, aural comprehension, reading, writing, and cultural competency in the Spanish language. This course is conducted predominantly in Spanish. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: SPA 1012. Offered: *(GT-AH4).

SPA 2012 - Spanish Language IV: GT-AH4 (3)
Continues Spanish Language III in the development of increased functional proficiency at intermediate mid-level in speaking, aural comprehension, reading, writing, and cultural competency in the Spanish language. This course is conducted predominantly in Spanish. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: SPA 2011. Offered: *(GT-AH4).

SPA 2015 - Spanish for the Professional II (3)
Continues SPA 1015 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.

Prerequisite: SPA 1015.

SPA 2035 - 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.

Prerequisite: SPA 1012.

SPA 2061 - 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.

SPA 2062 - Composition 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.

STE - Surgical Technology

STE 1000 - Fundamentals Surgical Technology (6)
Introduces the fundamental principles and practices of surgical technology, including an orientation to the profession and a review of legal and ethical issues. Topics about patient needs, special patient populations, the physical environment, and safety

issues related to the surgical setting and biomedical sciences will also be discussed.

Prerequisite: BIO 2101, BIO 2104, ENG 1021 or ENG 1022 or ENG 1031, HPR 1045, and MAT 1140 or higher.

STE 1001 - Surgical Technology Skills Lab (4)
Introduces hands-on skills in a mock operating room environment. This training will include the pre-operative, intra-operative and post-operative phases of surgery.

Corequisite: STE 1000.

STE 1005 - Pharmacology of Surgical Technology (2)
This course discusses relevant knowledge as it pertains to surgical pharmacology theory, drugs, and aspects of anesthesia.

Corequisite: STE 1000.

STE 1010 - Surgical Procedures I (3)
Reviews General, Obstetric/Gynecological and Urologic surgical procedures.

Prerequisite: STE 1000.

STE 1015 - Surgical Procedures II (3)
Reviews plastic, otorhinolaryngilogical, ophthalmologic and orthopedic surgical procedures.

Prerequisite: STE 1000.

STE 1020 - Surgical Procedures III (3)
Reviews cardiac, peripheral vascular, and neurologic surgical procedures. This course includes a review of the instruments, equipment and supplies utilized during the preoperative, intraoperative and postoperative phases of these procedures.

Prerequisite: STE 1000.

STE 1033 - Surgical Instruments Lab I (1.5)
Introduces the history and materials used in the manufacture of surgical instruments, as well as the methods used to maintain, clean, and sterilize surgical instrumentation and equipment. Introduces supplies, equipment, and the names, category, and use of instrumentation used for general, obstetric, gynecologic, otorhinolaryngologic, oral, maxillofacial, plastic, and ophthalmic surgical specialties.

Prerequisite: STE 1000.

STE 1034 - Surgical Instruments Lab II (1.5)
Introduces the history and materials used in the manufacture of surgical instruments, as well as the methods used to maintain, clean, and sterilize surgical instrumentation and equipment. Introduces supplies, equipment, and the names, category, and use of instrumentation used for genitourinary, orthopedic, cardiothoracic, peripheral vascular, and neurologic surgical specialties.

Prerequisite: STE 1000.

STE 1081 - Internship I (4)
Allows students to integrate theoretical concepts in a clinical surgical setting.

Prerequisite: STE 1000.

STE 1082 - Internship II (4)
Allows students to integrate advanced theoretical concepts in a clinical surgical setting.

Prerequisite: STE 1000.

STE 1083 - Internship III (4)
Allows students to integrate advanced theoretical concepts in a clinical surgical setting.

Prerequisite: STE 1000.

STE 2069 - CST Exam Review Course (1)
Prepares students for the National Certification Exam administered by The National Board for Surgical Technology and Surgical Assisting (NBSTSA) by introducing test taking skills and strategies for success. Students will review major concepts in the surgical technology program in preparation for the CST examination.

Prerequisite: STE 1000.

TEL-Teaching ESL

TEL 1000 - Teaching ESL 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.

TEL 1002 - Proc/Techs for ESL Classroom (3)
Focuses on the teaching of English grammar, speaking and listening, and reading and writing in the English as a Second Language (ESL) classroom. Instruction includes writing lesson plans, selecting and adapting instructional resources and technology, developing classroom management skills, and integrating cultural awareness. TESL students have the opportunity to observe various working models.

TEL 1003 - Career Strat-TESL Workplace (1)
Presents professional English as a Second Language (ESL) representatives from various area domains such as community college, teaching TESL abroad, community-based ESL adult schools, K-12 options, entrepreneurial use in workplace literacy, virtual ESL possibilities, private ESL institutions, and business technical areas for ESL abroad and locally. It provides interaction with professional teachers working in the field. An additional workshop will help students develop TESL job search skills and resume writing.

TEL 2025 - 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.

TEL 2045 - ESL in the Content Areas (3)
Prepares teachers who work with limited English proficient students to integrate effective instructional strategies that will assist in the development of English Language learners' (ELLs) social and academic English and support their transition to US culture and schools. This course is appropriate in a variety of program models, mainstream classrooms, self-contained ESL classrooms, and bilingual programs and may be adapted for use with pre-service teachers and para-educators.

TEL 2089 - Capstone (3)
Incorporates a demonstrated culmination of learning within a given program of study.

Corequisite: TEL 1000, TEL 1002, TEL 1003, TEL 2025 and EDU 1341 or TEL 2045. These courses may be taken at the same time.

THE - Theatre Arts

THE 1005 - Theatre Appreciation: GT-AH1 (3)
Provides an opportunity to discover, analyze, and evaluate all aspects of the theatre experience: scripts, acting, directing, staging, history, criticism, and theory. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

THE 1008 - Theatre Script Analysis: GT-AH1 (3)
Explore methods of reading and analyzing a variety of diverse texts for the stage. Additionally, this course provides an opportunity to interpret theatre scripts through cultural lenses and dramaturgical research methods. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

THE 1011 - Acting I (3)
Covers basic acting techniques and approaches including scene study, improvisation, and script analysis. It includes practical application through classroom performance.

THE 1012 - 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.

THE 1016 - 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.

THE 1031 - 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.

THE 1032 - 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.

THE 1041 - Improvisation I (1)
Helps students learn improvisation skills for performance and character development. Emphasis is placed on "Second City" style of improvisation.

THE 2011 - Dev of Theatre Greek-Renaissance: GT-AH1 (3)
Surveys the history and development of theatrical practices from Ancient Greece to the Renaissance as well as non-western forms, emphasizing all aspects of performance from period values to analysis of dramatic literature and culture. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

THE 2012 - Dev Theatre Restoration - Modern: GT-AH1 (3)
Surveys the history and development of theatrical practices from Restoration to the present as well as non-Western forms, emphasizing all aspects of performance from period values to analysis of dramatic literature and culture. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

THE 2015 - Playwriting: GT-AH1 (3)
Develops playwriting techniques emphasizing elements of dramatic structure, dialogue, styles, creative writing, and theatrical practices. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Offered: *(GT-AH1).

THE 2031 - Theatre Production III (3)
Allows students to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

THE 2032 - Theatre Production IV (3)
Allows students to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

THE 2037 - History of Costumes & Fashion (3)
Provides an examination of the clothing and accessories used by humans around the world from Prehistoric to Modern times.

THE 2045 - Basic Costume Design & 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.

THE 2055 - Advanced Playwriting (3)
Continues to explore playwriting techniques developed in THE 2015 for theatre and applies concepts of writing for movie, television, radio, and animation scripts, with emphasis on the dramatic process and form.

TRE - Tree Care

TRE 1010 - Arborist Skills I (1)
Examines aspects of being an arborist and the trade and occupations related to urban forestry. The course includes an orientation to the trade, and explores the standards related to the tree care industry, safety and personal protective equipment, electrical hazards awareness, ground support for aerial operations, basic tree biology, and the basic pruning cuts used by the trade.

TRE 1011 - Arborist Equipment Fundamentals (1)
Introduces students to the care and use of common equipment used by the trade. Chain saws, chippers, vehicle operations, plant health care, and aerial lift operations will be covered. Equipment maintenance is examined. Safety and safe work practices are reinforced.

TRE 1020 - Tree & Shrub Identification for Arborists (1)
Examines tree and shrub identification using industry accepted standards. Topics include anatomy and morphology, tree and shrub identification, and tools used by the trade to identify trees and shrubs. An introduction to insects and diseases will provide foundational knowledge for future courses in related instruction. The first in a three-class series, this class focuses on deciduous

and coniferous trees from the arborist apprenticeship must-know list.

TRE 1030 - Intro to Aerial Tree Work for Arborists (1)
Teaches pre-climb inspections, climbing equipment for safety, rope installations, ascending skills, re-positioning skills, maneuvering techniques, and descending skills. It also teaches the skills of selecting knots for various situations and applications. Emergency response procedures for arborist apprentices will be explored, and aerial rescue basic concepts are introduced in this course.

TRE 1031 - Applied Aerial Tree Work for Arborists (1)
Covers the skills involved in aerial work performed by arborists including safe work practices, operating chain saws in an aerial situation, performing pruning cuts at heights, rigging loads during aerial work, climbing in spurs and decision-making for aerial pruning cuts and tree care. Aerial rescue training for tree care workers is included in this course.

TRE 2010 - Arborist Skills II (1)
Examines the ANSI A-300 (American National Standards Institute) tree care standards and applies them to various tree care situations. Instruction includes how to assess different trees for pruning needs including an evaluation of when and where to make cuts and demonstrations of basic pruning cuts used by the trade. The course compares commercial, municipal, and utility applications for pruning as related to the pruning needs for specific trees.

TRE 2011 - Arborist Skills III (1)
Examines light rigging systems and hazards associated with working in trees. Methods for identifying branch failure risks and strategies for assessing and mitigating tree risks will be explored. The course also examines tree support and protection systems and the identification of signs and symptoms of decay, including the application of the CODIT (compartmentalization of decay in trees) model to assessing tree defects.

TRE 2020 - Tree Biology & Identification for Arborists (1)
Examines tree biology and relates concepts to the work performed by arborists in an urban forestry setting. Topics covered include understanding tree function and structure, categorizing the impact of diseases and pests, examining the CODIT (compartmentalization of decay in trees) model, and exploring tree risk concepts. The course will examine basic plant health needs, tree sites, and nutrition and soil requirements. The second in a three-class series, this course will focus on more coniferous and deciduous trees from the arborist apprenticeship must-know list, and explore associated tree and shrub disorders.

TRE 2022 - Plant Health Care & Shrub Identification for Arborists (1)
Explores plant health care (PHC) and integrated pest management (IPM), including the handling of chemicals, operating the spray equipment, and formulating PHC prescriptions. Integrated vegetation management, the use of soil amendments, specific plant disorders, and responding to tree damage from construction are also reviewed. As the third class in a three-class tree and shrub identification series this course also focuses on identifying both evergreen and deciduous woody shrubs in the field.

TRE 2030 - Rigging & Tree Removal Fundamentals (1)
Explores concepts and develops skills related to tree removal and rigging. This course focuses on safe climbing skills, safe tree removal skills, basic felling skills, rigging loads, using ropes and rigging systems, and performing ground work associated with tree removal.

TRE 2032 - Advanced Rigging & Tree Felling for Arborists (1)
Covers skills related to tree felling and field skills associated with working outside. Topics include specialized knots and equipment used in rigging applications, making aerial pruning cuts in accordance with tree care standards, tree felling and field work associated with the occupation. Key concepts and safety related to wood under tension will be introduced in this course.

TRE 2089 - Capstone: Leadership in Tree Care Operations (1)
Prepares the student for key job duties and tasks associated with tree care operations, communications, planning, and leadership. Instruction includes training others, setting up job sites, managing resources, reporting work performed, and applying communication and interpersonal skills to various situations. Activities allow students to build skills interpreting written work orders/plans, and encourage them to apply leadership skills to solve problems.

VET - Veterinary Technology

VET 1002 - Veterinary Medical Terminology (1)
Introduces the student to the structure of veterinary medical terms with emphasis on using and combining the most common prefixes, roots and suffixes. Includes terms related to major body systems, oncology, psychiatry, as well as clinical laboratory and diagnostic procedures and imaging. Class structure provides accepted pronunciation of terms and relative use in the veterinary specific setting.

VET 1003 - Veterinary Assistant Restraint & Handling (2)
Introduces students to basic animal care skills and clinical procedures common to a veterinary assistant in practice. Laboratories provide practice in restraint, grooming and physical exam techniques.

Prerequisite: Admission to the VET Assistant program.

VET 1004 - Assistant Large Animal Nursing (1)
Presents commonly encountered medical and surgical conditions of common large animal species with emphasis on the role of the veterinary assistant. This course focuses on handling and specific skills necessary for the profession.

Prerequisite: VET 1003.

VET 1008 - Intro to Laboratory Procedures (3)
Studies the biology, clinical appearance and laboratory diagnosis of parasitic diseases of veterinary and zoonotic importance.

Prerequisite: Admission to the VET program and BIO 1111.

VET 1009 - Applied Companion Animal Behavior (3)
Explores the topics of companion animal behavior and learning theory through critical reviews of behavioral literature and its implications for applied techniques in behavior and training. This course provides an understanding of how animals learn, how we can improve inter-species communication to reduce fear, stress, and anxiety, and how to apply this knowledge to the everyday treatment of animals under veterinary care.

Prerequisite: VET 1003 OR VET 1016. Admission to the Veterinary Assistant or Veterinary Technology Program, or an approved assistant or credentialed technician.

VET 1014 - Vet Asst Lab & Clin Procedures (3)
Covers selected areas of common laboratory and diagnostic imaging procedures performed in a veterinary hospital. Emphasis is on assisting the veterinarian and/or veterinary technician with these procedures.

Prerequisite: VET 1003 OR VET 1016.

VET 1015 - Surgical Nursing (2)
Introduces surgical instruments and supplies, aseptic technique, and the roles of all surgical personnel in the field of veterinary medicine. This course covers commonly performed veterinary surgical procedures. This course meets the requirements of an American Veterinary Medical Association (AVMA) Veterinary Technology Program.

Prerequisite: VET 2005. Corequisite: VET 2006.

VET 1016 - Humane Treatment Handling of Animals (3)
Focuses on humane animal handling techniques in a veterinary clinical setting. Restraint, medication administration, and common clinical procedures routinely performed by veterinary technicians will be performed.

Prerequisite: Admission to VET Program. NOTE: Handling of animals will include domestic small and large species.

VET 1017 - Veterinary Assistant Surgery & Nursing Care (2)
Introduces surgical assisting of the veterinarian and/or the veterinary technician, including basic knowledge of surgical instruments and surgery room hygiene. It also introduces basic nursing care of animal patients including safety concerns and nursing procedures.

Prerequisite: VET 1003. Corequisite: Prerequisite/Corequisite: VET 1014. This course may be taken at the same time as VET 1014.

VET 1020 - Office Procedures & Relations (2)
Presents common veterinary office procedures including administration, professional etiquette, client relations, career development and job searching skills. Enrichment of computer skills in relationship to current veterinary management software will be emphasized.

Prerequisite: Admission to VET or VET Assistant program.

VET 1034 - Diagnostic Imaging (2)
Covers selected areas of diagnostic imaging with an emphasis on radiology. Topics will include radiation properties, x-ray production, radiographic equipment, darkroom procedures, the radiographic image, animal positioning and radiation safety. An introduction to special imaging techniques such as computed tomography (CT scan) and ultrasound will also be included.

Prerequisite: MAT 1120 and VET 2005. Corequisite: This course and VET 2005 may be taken at the same time.

VET 1072 - Clinical: First Year Rotation (1)
Examines basic animal care, examination, and handling skills essential for veterinary technicians including demonstrating an understanding of animal behavior, restraining cats and dogs in a safe and effective manner, performing thorough physical examinations on cats and dogs, obtaining accurate physiological data on cats and dogs, obtaining a complete patient history, performing a nail trim, administering vaccines and collecting a blood sample from a cat or dog.

VET 1080 - Internship: Private Practice (3)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

Prerequisite: VET 1008, VET 1015, VET 1016, VET 1020, VET 1034, VET 2024 and VET 1241.

VET 1083 - Internship (2.25)
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. This internship provides students with practical day to day experience in handling and restraint of animals, assisting with office procedures, clinical laboratory techniques, and surgical preparation.

Prerequisite: VET 1020 and VET 1003. Corequisite: VET 1014 and VET 1017 may be taken at the same time as VET 1083.

VET 1206 - Exotic Animal Handling (2)
Designed to provide students knowledge and skills required for veterinary technicians. This course focuses on exotic animal husbandry, handling, restraint, and specific problems encountered with exotic animals.

Prerequisite: VET 1016. Admission to the VET program. NOTE: Handling of animals will include exotic pets and laboratory animals.

VET 1241 - Clinical Laboratory Procedures (4)
Discusses the biochemical derangements that characterize disease. Topics include proper collection and analysis of urine, blood, and cytological samples; basic principles of anatomic pathology; necropsy procedure and sample collection.

Prerequisite: VET 1008 and VET 2005.

VET 2005 - Veterinary Anatomy & Physiology I (4)
Covers the anatomy and physiology of the following body systems: Integumentary, Skeletal, Muscular, Respiratory, Cardiovascular and Lymphatic. The main species covered will be canine, feline, equine, and bovine.

Prerequisite: Admission to the VET program and BIO 1111.

VET 2006 - Veterinary Anatomy & Physiology II (4)
Provides additional detail in anatomy and physiology of companion and farm animal species. The class covers interrelationships between body systems, such as respiratory, cardiovascular, urogenital, and reproductive. Additional topics include metabolism and digestion, acid/base balance, neurology, and reproductive endocrinology. Applied laboratory experiences are included as well as clinical applications of anatomy.

Prerequisite: VET 2005.

VET 2024 - Pharmacology Veterinary Tech (3)
Provides background in pharmacology principles including topics such as: mechanism of drug action, types of drugs, anesthetic

agents, pharmacy management and calculations related to drug dosages.

Prerequisite: MAT 1120 and VET 2005 and VET 2006.
Corequisite: This course and VET 2006 may be taken at the same time.

VET 2025 - Anesthesiology (3)
Covers all stages of an anesthetic event (pre-, peri-, post-op) including patient evaluation, appropriate forms of injectable and gaseous anesthesia for surgical and diagnostic procedures, and a working knowledge of equipment used during the anesthetic event. Other topics include anesthesia monitoring, response to complications, and surgical pain management. Species covered include canine, feline, bovine, equine, and an overview of exotics.

Prerequisite: VET 2006 and VET 2024.

VET 2027 - Animal Nutrition (2)
Gives students a foundation in the principles of animal nutrition. The course focuses on the basic elements of nutrition including the major categories of nutrients, and their sources, digestion, and metabolism. Both large and small animal feeds and feeding will be covered. The course emphasizes the relationship between nutrition and health.

Prerequisite: VET 2006.

VET 2038 - Small Animal Nursing (2)
Presents commonly encountered medical and surgical conditions of the dog and cat with emphasis on the role of the veterinary technician. This course focuses on nursing concepts and specific skills necessary for the profession. Laboratory sessions will provide a hands-on teaching experience.

Prerequisite: VET 1016.

VET 2039 - Large Animal Nursing (2)
Presents commonly encountered medical and surgical conditions of common large animal species with emphasis on the role of the veterinary technician. This course focuses on nursing concepts and specific skills necessary for the profession. Laboratory sessions will provide a hands-on teaching experience.

Prerequisite: VET 1016.

VET 2042 - Veterinary Critical Care (2)
Provides instruction in appropriate nursing assessment, monitoring and intervention with emergencies. Uses knowledge and understanding of overall anatomy, physiology, and disease or accident process to assist in veterinarian's diagnoses and treatment.

Prerequisite: VET 2025. Admission to the VET program or Certification as a Veterinary Technician.

VET 2050 - Clinical Competency Evaluation (1)
Evaluates the students' clinical skills and knowledge after successful completion of the internship courses, in order to prepare them for the national board examination and clinical practice. Evaluation of clinical skills and knowledge includes selected clinical laboratory techniques (parasitology, hematology, urinalysis, cytology, chemistry, serology, microbiology); diagnostic imaging; office procedures; surgical preparation, instrumentation and assistance; anesthesia induction, maintenance and monitoring; restraint and handling techniques; small, large and laboratory animal diagnostic and therapeutic techniques; and pharmacology calculations, labeling and drug classification.

Prerequisite: VET 1080.

VET 2070 - Clinical I (1)
Offers the clinical practicum required for the program.

Prerequisite: VET 2025 and VET 2027 and VET 2038 and VET 2039.

VET 2078 - Workshop (1)
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: VET 2025.

VET 2079 - Seminar (1)
Meets the individual needs of students. Student engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: VET 1241.

VET 2081 - Internship (1)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

Prerequisite: VET 2025 and VET 2038 and VET 2039.

VET 2082 - Internship (7)
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.

VET 2083 - Internship (1)
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

WEL - Welding Technology

WEL 1000 - Safety for Welders (1)
Covers the hazards of welding on health and safety.

WEL 1001 - Allied Cutting Processes (4)
Covers setting up equipment and performing cutting and gouging operations utilizing the oxyacetylene, air carbon arc, exothermic, and plasma arc cutting processes. This course will also provide an introduction to blueprint reading.

Prerequisite: Prerequisite or Corequisite: WEL 1000 or MTE 1102 may be taken concurrently.

WEL 1003 - Basic Shielded Metal Arc I (4)
Covers Shielded Metal Arc Welding (SMAW) operation utilizing E-XX10 electrodes.

Prerequisite: Prerequisite/Corequisite: WEL 1000 or MTE 1102 may be taken at the same time.

WEL 1004 - Basic Shielded Metal Arc II (4)
Covers Shielded Metal Arc Welding (SMAW) operation utilizing E-XX18 electrodes.

Prerequisite: Prerequisite/Corequisite: WEL 1003 may be taken at the same time.

WEL 1006 - Blueprint Reading for Welders & Fitters (4)
Covers interpretation and creation of weld symbols and blueprints used in metal fabrication.

WEL 1010 - Advanced Shielded Metal Arc I (4)
Covers Shielded Metal Arc Welding (SMAW) operations utilizing a variety of electrodes and advanced joint designs.

Prerequisite: Prerequisite/Corequisite: WEL 1004.

WEL 1024 - Gas Tungsten Arc Welding I (4)
Covers Gas Tungsten Arc Welding (GTAW) operations in various positions and joint designs.

Prerequisite: Prerequisite/Corequisite: WEL 1000 or MTE 1102 may be taken at the same time.

WEL 1045 - Intro to Robotic Welding (2)
Introduces the use of the teaching pendent to program a robotic welding machine. Will cover basic terminology, machine safety, programming of all six axis points, and weld sequencing. Provides practical application in programming and operating a robot welding machine.

Prerequisite: Prerequisite/Corequisite: WEL 2001.

WEL 1050 - AWS Qualification Testing (1)
Provides students with the opportunity to complete a welding qualification test in accordance with an American Welding Society code or specification.

Prerequisite: Prerequisite/Corequisite: WEL 2003. This course and WEL 2003 may be taken at the same time.

WEL 2001 - Gas Metal Arc Welding I (4)
Covers Gas Metal Arc Welding (GMAW) operations on carbon steel utilizing various positions and joint designs.

Prerequisite: Prerequisite/Corequisite: WEL 1000 or MTE 1102 may be taken at the same time.

WEL 2003 - Flux Cored Arc Welding I (4)
Covers Flux Cored Arc Welding (FCAW-S) operations utilizing self-shielded wire in various positions and joint designs.

Prerequisite: Prerequisite/Corequisite: WEL 2001. This course and WEL 2001 may be taken at the same time.

WEL 2024 - Gas Tungsten Arc Welding II (4)
Covers Gas Tungsten Arc Welding (GTAW) operations utilizing a variety of base metals and advanced joint designs.

Prerequisite: WEL 1024.

WEL 2030 - Pipe Welding I (4)
Covers pipe welding operations utilizing the Shielded Metal Arc Welding (SMAW) process in a variety of positions on carbon steel.

Prerequisite: Prerequisite/Corequisite: WEL 1004 and WEL 2001 and WEL 2003.

WEL 2031 - Pipe Welding II (4)
Covers pipe welding operations utilizing various processes and positions.

Prerequisite: WEL 2024 and WEL 2030.

WEL 2050 - Layout and Fabrication (4)
Develops welding and associated skills in metal fabrication.

Prerequisite: Prerequisite or Corequisite: WEL 1001 and WEL 2001.

WEL 2051 - Design, Layout & Fabrication (4)
Develops advanced welding and associated skills in the use of drawings and blueprints in planning. This course includes designing and layout projects.

Prerequisite: Prerequisite/Corequisite: WEL 2050 and CAD 2455 or WEL 1006.

WEL 2064 - Creative Welding (4)
Introduces design and construction of welded sculptures with the use of different fabrication techniques. This course includes uses of different metalworking machines, hot and cold working practices, and demonstration of coloring and texturing metal.

Prerequisite: Prerequisite/Corequisite: WEL 1001 and WEL 1024 or WEL 2001.

WEL 2089 - Capstone (1)
Demonstrates culmination of learning within a given program of study.

WST-Women and Gender Studies

WST 2000 - Intro to Women's Studies: GT-SS3 (3)
Explores the interdisciplinary field of women's studies. This course is an examination of the following topics: the historical basis of gender inequality; the history of social movements for gender equality and women's studies; women's achievements throughout history in various professional and academic fields; women's social, economic, religious, health and political status in the U.S. and around the globe; gender relations; intersectionality; cultural, media and artistic representations of women. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

WST 2100 - Women & Social Action: GT-SS3 (3)
Explores the role of the systems of oppression in society and avenues available to create both individual and collective change through social action. Awareness of agency to enact change and become empowered are highlighted in the course. Informed by intersectional feminist pedagogy, this course explores issues of diversity including, but not limited to race, class gender, age and disability. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

WST 2200 - Goddesses & Women in Ancient World: GT-SS3 (3)
Surveys gender socialization through a study of arts, literature, music, politics, religion, philosophy, laws, and social standards.

The course introduces the history of ideas that have defined women's place in societies. Course 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. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

WST 2300 - Women's Sexuality: GT-SS3 (3)
Explores the development of sexualities throughout history and cross-culturally. The course addresses theories of sexuality and erotic power, women’s sexualities across cultures and throughout the lifespan, the perception of sexuality in religion and culture, and creative visualizations of women’s sexuality in literature, visual, music, and performance art. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: College English Readiness: Equivalent testing score or enrollment in or completion of ENG 0090 or higher. Offered: *(GT-SS3).

Index

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