



Please see Catalog Addendum for updates

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Red Rocks Community College Catalog 2022-2023

This catalog applies to students beginning their RRCC studies from Summer 2022 through Spring 2023.

This catalog contains comprehensive information about Red Rocks Community College (RRCC), the degrees and certificates it offers, and the requirements you must satisfy before receiving a degree or certificate. This publication describes admission and registration procedures, as well as information on tuition and fees, financial aid, and services offered by the college.

You will graduate under the catalog requirements listed for the semester in which you were first enrolled. If you interrupt attendance for two consecutive semesters (excluding summer term) and then return, you must meet the requirements of the catalog in effect at the time you re-enroll. You also may choose to use the catalog that is in effect the semester in which you graduate. Be sure to keep a copy of your catalog.

The programs, policies, statements, and procedures contained in this publication are subject to change or subject to correction by RRCC without prior notice. RRCC reserves the right to cancel course offerings; revise the academic calendar; or change curriculum graduation procedures, requirements, and policies that apply to you, the student, at any time. Any revisions to the catalog will be published online.

This publication is not intended to be a contract between you and RRCC. However, you are bound by the policies, procedures, standards, and requirements stated herein, so long as they are in effect.

Lakewood Campus

13300 West Sixth Avenue
Lakewood, CO 80228

Arvada Campus

10280 W. 55th Avenue
Arvada, CO 80002

Website

www.rrcc.edu

Phone

303-914-6600

Welcome from the President

It is my pleasure to welcome you to Red Rocks Community College where we are proud to support the educational dreams of our students. Red Rocks enhances our community by providing a superior education full of possibilities that enriches lives and builds careers.

Red Rocks Community College provides a welcoming college environment. We have top faculty who bring real-world, professional experience along with passion for teaching and mentoring students. We have excellent administration and staff that are devoted to student success.

Here are a few more things you should know about our college:

- We offer an inclusive environment where all students are welcome. *Military Times* ranks RRCC #16 for 2-year schools in the nation as Best for Vets. RRCC was ranked #4 by *Campus Pride* as Best of the Best for LGBTQ-Friendly Colleges & Universities.
- Known for its rigorous academics, Red Rocks transfers more students to Colorado School of Mines than any other college in the nation. We also have a new Mines Academy program at Red Rocks, which is a unique opportunity for students to earn guaranteed admissions to Colorado School of Mines. This joint program provides a seamless transfer experience and an affordable pathway to any of the undergraduate engineering and science degrees at Mines. RRCC also provides an integrated pathway to nursing degree at University of Colorado Anschutz Medical Campus.
- Our Dr. John U. Trefny Honors Program develops future leaders in STEM fields by providing opportunities for advanced research projects, internships, service learning, and travel.
- RRCC is the first community college in the nation to offer a master's degree. Our Master of Physician Assistant Studies prepares students to enter one of the most sought-after careers in the U.S. We celebrated our first graduating master's degree class in 2019. RRCC was also the first community college in our system to offer a bachelor's degree. We now offer two: one in Water Quality Management Technology and one in Secure Code Software Development. In addition, our Cyber Security apprenticeship program has received national recognition.
- The RRCC Foundation has provided over \$7 million in scholarships to nearly 3,800 students to date.
- Our Phi Theta Kappa honor society repeatedly receives international awards, including Top 10 Chapter among 1,300 around the world.
- Thanks to a \$22.5 million expansion, our Arvada campus provides cutting-edge health career training as well as general education instruction in a new state-of-the-art learning environment.
- Red Rocks supports student wellness through the availability of a 35,000 square foot student recreation center.
- RRCC believes in connecting student learning to the real-world. Innovation and Engagement creates opportunities through the IDEA Lab, Community Engaged Learning, Entrepreneurship and STEM. Students connect learning to future employment through Career Success and Internships. We also offer opportunities for students to conduct high level research, to travel abroad, and to serve in student leadership roles.
- RRCC graduates are number one in first year earnings among all 13 community colleges in the state of Colorado.

Welcome to our community. We are here to help you succeed!

Dr. Michele Haney

President, Red Rocks Community College



Dr. Haney joined RRCC in 2008, bringing with her nearly 30 years of community college leadership. During her tenure, she has worked to improve technology to expand teaching and learning opportunities, helped streamline the transition of high school students into concurrent enrollment programs, and initiated plans to expand grant funding and workforce development. While at RRCC, Dr. Haney's leadership has increased student retention, graduation, and minority enrollment.

Academic Calendar

The following is a *condensed* Academic Calendar and is subject to change. For a complete Calendar with Census dates and financial aid due dates, please visit, www.rccc.edu/academic-calendar.

Summer 2022

Registration for Summer 2022 semester begins	April 4, 2022
No classes after 5:00 p.m.	May 27, 2022
No classes; Memorial Day Holiday (both campuses closed)	May 28 – 30, 2022
Full Term 8-week and 9-week Sessions begin	June 1, 2022
No classes; Independence Day Holiday (both campuses closed)	July 4, 2022
8-week Summer Session ends	July 25, 2022
9-week Summer Session ends	August 2, 2022
Summer Sessions end	August 2, 2022

Fall 2022

Registration for Fall 2022 Semester begins	April 4, 2022
15-week Weekend Classes begin	August 19, 2022
15-week Classes begin (other classes begin throughout the fall)	August 22, 2022
7.5-week Accelerated Session I begins	August 22, 2022
No classes after 5:00 p.m.	September 2, 2022
No classes; Labor Day Weekend (both campuses closed)	September 3 – 5, 2022
7.5-week Accelerated Session II begins	October 13, 2022
No classes; All-College Development Day	October 25, 2022
Spring 2023 Registration begins	November 7, 2022
No classes; Fall Break (both campuses open)	November 21 – 27, 2022
Thanksgiving Holiday (both campuses closed)	November 24, 2022
Fall Session ends	December 13, 2022

Spring 2023

Registration for Spring 2023 Semester begins	November 7, 2022
No classes; Martin Luther King Day Holiday	January 16, 2023
15-week Classes begin (other classes begin throughout the spring)	January 17, 2023
15-week Weekend Classes begin	January 20, 2023
No classes; Spring Break (both campuses open)	March 20 – March 26, 2023
Summer 2023 Registration begins	April 3, 2023
Fall 2023 Registration begins	April 3, 2023
No classes; All-College Development Day	April 18, 2023
Spring Session ends	May 9, 2023
Graduation Ceremony	May 13, 2023

About Red Rocks Community College

RRCC is proud to serve our community with a flexible, high-quality education at an affordable price. Our goal is to make sure your experience at RRCC is rewarding in every way whether you are earning a degree, interested in taking general education courses to transfer to a four-year college, brushing up on career skills, or seeking life-long learning opportunities.

Established in 1969, Red Rocks Community College has been providing high quality academic programs for over 50 years. More than 13,000 students per year choose RRCC to get a jump start on a bachelor's degree, earn an associate degree or certificate, update their skills, or enhance their lives. In addition to our campus locations, students can choose from hundreds of online courses. Our top-notch academics have been accredited by the Higher Learning Commission, an independent corporation that was founded in 1895 as one of six regional institutional accreditors in the United States. Plus, specific programs such as Physician Assistant and Early Childhood Education have earned additional accreditation. RRCC courses are taught by highly skilled instructors who are experts in their fields.

Lakewood Campus

The RRCC campus in Lakewood lies on a 140-acre hillside near 6th Avenue and Indiana Street, minutes from downtown Denver and a short walk from the RTD Light Rail West Line. Not only is our location convenient, but the rolling hills of our grounds also make for beautiful views and supports an active community. The campus houses everything from state-of-the-art multimedia graphics computer labs to traditional classrooms and health-career practice areas. The full range of services for students includes an assessment center, academic advising, student support services, tutoring, financial aid, a library, a project center, and a student employment center. Our Student Life department offers something for every interest—Phi Theta Kappa honor society, student government, guest lectures, movies, and dozens of clubs centered on academics, outdoors, culture, and hobbies.

Our bookstore provides new and used textbooks, snacks, gifts, and school supplies. Disabled students can find support and services in Accessibility Services. In addition to academic support, the campus offers extras including a cafeteria and coffee shop, a student health and counseling center employing fully licensed medical providers, and a student recreation center. The Children's Center offers full-day care for children from 18 months to kindergarten.

Arvada Campus

The Arvada campus lies northwest of the intersection of Interstate-70 and Kipling Street. The Campus offers innovative scheduling options in a welcoming atmosphere. Student Affairs Services provides a full selection of resources including, Admissions & Enrollment, Pathway Advising, Assessment Center, Campus Life resources, Computer Commons & Library Services, and Financial Aid assistance.

In addition to the student resources offered, students have an opportunity to complete their Associate of Arts (AA), Associate of Science (AS), take prerequisite courses, or specific health programs of interest, and to take classes that enrich their lives. All required courses for the AA and AS degrees are offered with the two-year Smart Track sequence of courses making it easier to complete your degree and transfer. The Arvada Campus is home to the Medical Imaging program (Ultrasound and X-Ray Technology), Integrated Health program, Nurse Aide, RN Refresher, * Integrated Nursing Pathway, Medical Office Technology (Medical Assistant, Medical Office and Medical Billing & Coding), Phlebotomy programs and the graduate level Physician Assistant program.

* The Integrated Nursing Pathway is a partnership with University of Colorado, Anschutz Medical Campus, College of Nursing. Students selected for this program complete their first year at Red Rocks and then complete the subsequent six semesters (summer, fall, spring, summer, fall and spring) at the University of Colorado, Anschutz Medical Campus.

Guiding Principles at RRCC

Vision

We envision Red Rocks as a national and international leader in community college education, recognized for accomplishment of our students' goals, engagement with our community, empowerment in our workplace, and commitment to our values.

Mission

Our mission is to provide students with opportunities for growth and development that set the foundation for self-directed learning, academic achievement, and career accomplishment. We do this through high-quality, innovative educational programs that convey our passion for learning, our commitment to excellence, and our dedication to our students and the communities we serve.

Values

These are the principles that define our values and guide us in our actions and decisions:

- Integrity: Honest, fair, ethical, accountable
- Collaboration: Teamwork, trust, empowerment, respect
- Learning: Professionalism, growth, engagement, achievement
- Inclusiveness: Diversity, respect, community, understanding
- Communication: Dialogue, appreciation, feedback, connection

Information: www.rrcc.edu/about-us/our-mission

Accreditation

Red Rocks Community College is accredited by the Higher Learning Commission, 230 South LaSalle St., Suite 7-500, Chicago, IL 60602. www.hlcommission.org info@hlcommission.org 1-800-621-7440.

Program Approval

Red Rocks Community College programs are approved by the State Board for Community Colleges and Occupational Education and Colorado Community College System, 9101 E. Lowry Blvd., Denver, CO 80230-6011. Information: 303-620-4000.

Non-Discrimination Notice

Red Rocks Community College is committed to diversity in its people and programs. The 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 19-60 and SP 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. Red Rocks Community College will take appropriate steps to ensure that the lack of English language skills will not be a barrier to admission and/or participation in vocational education programs.

RRCC has designated Patty Davies as its Affirmative Action Officer/Equal Opportunity Administrator/Title IX Administrator with the responsibility to coordinate its civil rights compliance activities and grievance procedures. Report all concerns or complaints relating to discrimination or harassment to the Title IX/EO Coordinator(s). For information, contact Patty Davies Executive Director, HR, Title IX Coordinator, Title VII/Equal Opportunity Coordinator, ADA/Sec 504 Coordinator, via mail at 13300 West Sixth Avenue, Lakewood, CO 80228. Phone 303.914.6298, or email patty.davies@rrcc.edu.

You may also contact the Office for Civil Rights, U.S. Department of Education, Region VIII, Federal Office Building, 1244 North Speer Boulevard, Suite 310, Denver, CO 80204, telephone (303) 844-3417.

RRCC Foundation

The RRCC Foundation is a 501(c)(3) not-for-profit organization founded in 1991 to provide financial support to the college and its students, and to increase public and business awareness of the college's important role in the community. The Foundation exists because of generous individuals who believe in the value of a college education and believe that college should be accessible to everyone.

The Foundation began with one donor, a board of directors, and the Foundation staff, all of whom aspired to assist students and make a difference in their lives. Now, more than 28 years later, generous supporters have provided more than \$19 million in donations allowing the Foundation to award more than \$7.1 million dollars in scholarships and over \$6.3 million dollars for other Red Rocks Community College programs and assisted more than 4,100 students in meeting their educational and life goals.

Foundation Programs

Each year, more than \$1 million is distributed to support the students, faculty, and staff at the college. Scholarship applications are open mid-November and close early March. Applications accepted during this period are considered for awards for the following fall/spring. Scholarships are competitive and are awarded only once per year on the basis of both need and merit. Applications can be found online: <https://rrcc.academicworks.com>.

Giving to the Foundation

The RRCC Foundation accepts and manages a variety of gifts, including cash, pledges, stock transfers, planned gifts, and bequests. Gifts may be designated for specific purposes or for the area of greatest need, as determined by the Foundation board and college administration.

The Foundation is grateful to its supporters, as it is only with their assistance that the Foundation can continue to support the College and its students. If you are a student needing assistance or a donor wishing to participate, call us at **303-914-6308** or visit our website at **www.rrcc.edu/foundation**.

Foundation Board

The Foundation is governed by a board of up to 30 community and business leaders.

Dr. Agneta Albinsson
Kristen M. Anderson
Kevin J. Bervik
John G. Brant
Kimberly Carver
Paula Claussen
William Conrad
Michael Coughlin
Carl Craig
Jim Dascalos
Michelle Fournier Johnson
Robb Gair
Dr. Michele Haney
Dan Leach
Clarence Low
Tom Menk
Skip Olson
Dr. Melinda O'Rourke
Shaw Schulder
Doris Stipech
John Sullivan
Dr. John Trefny
Shirleen Tucker
Denise Waddell
Jim Whitfield
Jamie Biesemeier-Wilkins

Rocky Mountain Education Center (RMEC)

RMEC Industry Training

Work Force Training Solutions

RMEC is the continuing education division of Red Rocks Community College. RMEC specializes in occupational safety, health, environment and business training enabling employers to meet local and national training compliance. Customized training can be provided on our campus in Lakewood or at our employer clients' locations. Additional areas of expertise include technical training in facilities engineering and supervisor and leadership development for the technical workforce. RMEC has partnered with host locations in the US and abroad to offer technical training. RMEC administers the Colorado First and Existing Industry (CFEI) Grant program for the State of Colorado serving employers in Jefferson, Clear Creek, Park, and Gilpin counties.

For more information call 800-933-8394.

RMEC Mission

The Rocky Mountain Education Center anticipates and responds to the training needs of the community. This training areas include occupational safety, health, environment and business and are designed to produce efficient and profitable solutions for the employers we exist to serve. Our client base is national and international in scope.

To Accomplish Our Mission:

- We seek partnerships with stakeholders that share our workforce development goals to build capacity through long-range planning and the development of competitive strategies
- We provide quality, cost-effective workforce development and training guided by our employer partners and clients that meets or exceeds their skills training needs
- We build workforce competencies in both knowledge and skills to increase employability and advance career paths
- We distinguish ourselves through customized development of employer driven training solutions across multiple industry sectors
- We continually evaluate the training we provide through student and client follow up to measure improvements in productivity, profitability, and improved safety performance.

Guide to Catalog Terms

Accessibility Services:

This office coordinates services for RRCC students with disabilities so that they have equitable access to pursue their educational goals. Call 303-914-6733 or 720-372-1591 (video phone).

Addendum:

Revisions or extra information added to a document, contract, report, or publication.

Admission:

People ages 17 and above who want to attend RRCC can apply for entry to the college. The Office of Admissions is directly across from the main entrance of the Lakewood Campus.

Advisors:

RRCC's academic (also referred to as general) advisors help new and continuing students at all stages of their college careers, particularly those seeking certificates, degrees, and/or eventual transfers to four-year colleges or universities. Advising is located next to the Admissions Office on the Lakewood Campus. Advising is also available at the Arvada campus by appointment.

Faculty advisors also are available to assist students. Many times, academic advisors will refer students to faculty advisors for specific information concerning courses and programs. If you are pursuing a certificate or associate of applied science degree, consulting a program area faculty advisor is helpful.

Assessment:

In a community college setting, your English and mathematics skills are assessed so that you can begin your college career with the best chance of succeeding. RRCC administers the placement test: it is NOT an entrance exam but, it does give students, advisors, and instructors the information needed to determine which classes students are ready to take.

Once you are enrolled in classes, your instructors will assess your progress regularly using a variety of methods. Yes, exams are one way, but other methods include writing essays, reports, and research papers; giving oral reports; completing exercises and homework assignments; and participating in classroom discussions. It is important that YOU assess your own progress so that you can ask questions and seek help when necessary.

Audit (AU):

If you want to take a class without earning credit or receiving a final grade, you can choose to do so at the time you register for the class; you cannot change your mind after registering and declare that you want to earn credit and a grade for the class. Also note that you must pay full tuition and fees, and you will not receive the COF stipend.

Catalog:

The RRCC Catalog lists and describes essential information for all students, advisors, instructors, staff, and administrators. Use the catalog in conjunction with each semester's schedule of classes. The catalog is a vital resource that you need to read and review regularly. You will graduate under the requirements in effect for the semester that you first enrolled unless you have a one-year break in attendance (excluding summer term). If you interrupt attendance you must meet the requirements of the catalog in effect at the time you re-enrolled. You also may choose to use the catalog in effect during the semester you graduate. For more information and/or clarification, meet with your advisor.

Certificates:

In addition to two-year degrees, you can earn certificates in a variety of specialties. A certificate might require as few as five credits and in some cases can count toward a degree.

College-Level Examination Program® (CLEP):

The College-Level Examination Program® or CLEP gives students the opportunity to demonstrate college-level achievement through taking exams that can lead to credit for designated undergraduate courses.

Information: www.collegeboard.com/student/testing/clep/about.html.

College Opportunity Fund (COF):

The state of Colorado will pay a portion of the tuition for Colorado residents attending RRCC or any state-supported or participating private college or university. Students must apply to COF and authorize its use at the attending college. Apply online at www.rrcc.edu/college-opportunity-fund. You will then need to authorize COF once you have registered for courses. You can do so by logging into "The Rock" and clicking on Student Account.

Colorado Community College Common Courses:

Courses with common content carry the same prefix, number, title, credits, description, competencies, and outline. These commonly described courses facilitate transfer and articulation arrangements for Colorado's secondary and community college students and ensure curriculum quality across the colleges.

Colorado Community College System (CCCS):

The CCCS comprises the state's largest system of higher education. Its career and academic programs in the 13 state community colleges serve more than 128,000 students annually. www.cccs.edu

Co-requisite:

A co-requisite is a course that is required with another course. For example, a student enrolled in REE 201 (Real Estate Brokers I) must also be enrolled in REE 202 (Real Estate Brokers II). In this particular case, both classes must be taken together; they meet at the same time with the same instructor. (If a co-requisite is required, you will see an explanatory note in the current semester's schedule and often in the "Course Descriptions" section of the catalog.) Meet with an academic or faculty advisor before enrolling in classes to learn more about specific co-requisites.

Credit(s):

A credit is a unit of study. The number of credits assigned to each course can be found in the "Course Descriptions" section of the catalog as well as in the listing of courses in the current semester's schedule. If you have questions concerning credits, the best source of information is an academic or a faculty advisor.

Note: Full-time students are those who take 12 or more credits in a semester; part-time students are those who take fewer than 12 credits in a semester.

Degrees:

RRCC offers a variety of two-year associate degrees:

- Associate of Applied Science
- Associate of Arts
- Associate of General Studies – Generalist
- Associate of Science

Meet with a faculty or academic advisor to learn about the requirements for each degree.

Electives:

Students choose an academic course from a list of options.

English as a Second Language (ESL):

Students for whom English is their second language can find assistance in the ESL/Foreign Language Lab located on the Lakewood campus.

Financial Aid:

Tuition assistance is available in three types: grants, loans, and work-study. To learn more about financial aid, visit www.rrcc.edu/financial-aid, or stop by the Financial Aid Office to meet with a financial aid representative.

General Education Courses:

These are courses not directly related to a student's formal preparation for a career but that need to be part of every college student's body of knowledge in order for him or her to function as an educated adult. These courses are numbered 100 and above.

General Education Development (GED):

If a student has not graduated from high school, passing the GED certifies that he or she has high school-level academic skills.

Grade Point Average (GPA):

GPA refers to your average grade and is determined by dividing the grade points (Quality Points) you have earned by the number of Quality Hours you have earned.

Graduation:

Meet with a faculty or an academic advisor BEFORE beginning any program of study; advisors know the requirements and can help you stay on the path to graduation. Upon successful completion of degree or certificate requirements, you can receive recognition for your efforts during annual commencement exercises.

Graduation Application:

Near the beginning of the semester in which you will complete your degree requirements to graduate, submit a graduation application form by the deadline listed in the Academic Calendar.

Near the beginning of the semester in which you want to graduate, submit a graduation application form by the date listed in the current semester's schedule. The application form is available online at www.rccc.edu/student-records/graduation-application.

GT: Statewide Guaranteed Transfer course:

See Guarantee Transfer Courses on page 69

GT-AH1: Arts & Humanities

GT-AH2: Literature and Humanities

GT-AH3: Ways of Thinking

GT-AH4: Foreign Languages (must be Intermediate/200 level)

GT-CO1: Introductory Writing Course

GT-CO2: Intermediate Writing Course

GT-CO3: Advanced Writing Course

GT-HI1: History

GT-MA1: Mathematics

GT-SC1: A science with a required laboratory

GT-SC2: A science without a required laboratory

GT-SS1: Economic or Political Systems

GT-SS2: Geography

GT-SS3: Human Behavior, Culture, or Social Frameworks

GT Pathways Curriculum:

GT Pathways is a set of general education courses that the state guarantees to transfer. Receiving institutions shall apply guaranteed general education courses to a student's general education or major requirements. Approved courses in GT Pathways are not based on course equivalencies but meet content and competency criteria. Go to <http://highered.colorado.gov/Academics/Transfers/gtPathways/curriculum.html> for more information.

International Students:

These are students from another country who are admitted to the U.S. on an F1 non-immigrant student visa.

Learning Commons:

The Lakewood Learning Commons is located on the second floor next to the Library, above the Community Room. The Lakewood Learning Commons offers walk-in tutoring in math, writing, the sciences, accounting, computer applications and programming, and many other subjects. The Arvada Learning Commons offers tutoring in math, writing, biology, and chemistry. Tutoring is free to all RRCC students.

Open-Entry:

Anyone who can benefit from RRCC's instructional programs and courses, including high school graduates, non-graduates, and students 17 years or older who are currently enrolled in high school, are welcome to apply.

Phi Theta Kappa:

RRCC sponsors a chapter of Phi Theta Kappa, the International Honor Society for two-year colleges.

Plagiarism:

When an individual claims credit or fails to give credit for another person's or source's words and/or ideas, he or she has committed a serious academic offense, listed in the RRCC Catalog as academic dishonesty: "Those committing academic dishonesty will be subject to disciplinary action, such as failing the assignment or course and/or expulsion from the course or college." Work closely with your instructors and tutors to avoid plagiarism.

Prerequisite:

This is a course that is required before taking another course. For example, before you can enroll in ENG 122 (English Composition II), you must have taken ENG 121 and passed with an A, B or C. Prerequisites are listed within course descriptions of this catalog. Meet with an academic or faculty advisor before enrolling in classes to learn more about specific prerequisites.

Scholarships:

RRCC awards scholarships each year through the Foundation. The RRCC scholarship application is open November through March. Apply online at www.rccc.edu/scholarships.

State-Guaranteed General Education Courses:

These are general education courses that the state of Colorado requires for students seeking Associate of Arts (AA) or Associate of Science (AS) degrees. A variety of courses are available in the areas of communication, mathematics, arts & humanities, social & behavioral sciences, and natural & physical sciences. Meet with an academic or faculty advisor who can help you select the courses that fulfill the AA and AS degree requirements.

Tuition:

The fee charged for instruction by a formal institution of learning is called tuition. Paying tuition and fees allows you the opportunity to earn grades in the classes you take.

Do not assume you have been dropped from a class if you miss tuition and fee payment deadlines or fail to attend a class. Once you have registered for a class, you are responsible for paying full tuition and fees unless YOU drop the class on or before the drop/refund date listed in the current semester's schedule. RRCC does not automatically drop students for non-payment.

Admissions and Enrollment

Getting Started

1. Apply for Admission, the College Opportunity Fund (COF), and Financial Aid.

1. If you are new to RRCC or have been away from RRCC for a year or more, you need to complete the online application for admission at www.rrcc.edu/apply or stop by the Admissions Office. Upon completion, you will receive a Student ID number (example: S12345678). Save this number, as you will need it for registration and all other correspondence with RRCC. There is no fee to apply. Acceptance letters are sent by email or by regular U.S. mail. Please contact Admissions with any questions regarding the acceptance letter. **Information: 303-914- 6600.**
2. **Apply for and authorize COF:** If you are a Colorado resident for tuition purposes and did not sign up for COF through your admissions application, you can sign up online. The State of Colorado provides funding for students to attend college through COF. This is the state-paid portion of your tuition, which is a benefit to all Colorado residents. The COF application is free and can save you hundreds of dollars each semester on your tuition. You only have to apply for this benefit once. Please note that if you do not apply for and authorize COF funding, you are responsible for both the student share and the state share of all tuition and fees. When you fill out the college application you may select "yes" to have a COF account automatically created, or you may visit: www.rrcc.edu/college-opportunity-fund and click on **Sign up here!**
3. Apply for financial aid: Complete the Free Application for Federal Student Aid (FAFSA) online at studentaid.gov to see what funding you may receive to help you pay for college (grants, loans, and work-study). **The RRCC school code for your FAFSA is 009543.** The application process can take 4-8 weeks to complete, so apply early! The priority deadline for the year is April 15. ASSET-eligible students should complete the Colorado Application for State Financial Aid (CASFA) at <https://cdhesnapprod.regenteducation.net>.

Check the status of your financial aid by logging into The Rock student portal or by contacting the RRCC Financial Aid Office. For help applying for aid, make an appointment with the Financial Aid Office. When we receive your application, we'll email you to let you know about your next steps. For more information, visit www.rrcc.edu/financial-aid.

2. Complete the Red Rocks Orientation Session (required).

The Red Rocks Community College student orientation is currently offered in two online options: virtually in real-time and self-directed. Orientation is MANDATORY for all new students and for all students returning to RRCC following a break of a year or more. Orientation is designed to help students successfully navigate the college experience and will cover important topics such as programs of study, paying for college, student support and success services, and class registration preparation. You can learn more about orientation at: www.rrcc.edu/apply-now.

3. Provide transcripts from any previously attended colleges.

If you have taken college coursework prior to starting classes at RRCC, please provide a transcript from any previous college you have attended. This will help an advisor determine if you need to take the placement test.

RRCC also accepts credit for prior learning for students who have completed standardized exams such as College Level Examination Program (CLEP), Advanced Placement (AP), and International Baccalaureate (IB). RRCC will apply credits that meet the content and rigor of RRCC's courses and that apply to your declared degree or certificate program at RRCC. Please visit our Student Records web page for more information at www.rrcc.edu/student-records.

4. Satisfy Assessment Requirements.

You must provide evidence of college readiness before registering for courses. To determine which courses you should take, you must complete the placement test if you are: 1) a degree- or certificate-seeking student or 2) registering for a course with any prerequisites.

The untimed placement test is available in two forms. 1) You may take the Accuplacer on either the Lakewood or Arvada campus., 2) You may take the self-placement test www.rrcc.edu/assessment/placement-test. The main reasons you would want to take the Accuplacer instead of the self-placement is: 1) If you want a math class above college algebra, 2) A department is requiring it, or 3) You are unsure that the score you got in the self-placement test is correct. You must have applied for and received an RRCC student identification number prior to taking the placement test. If you choose to take the Accuplacer, you must schedule an appointment at RRCC.AssessmentCenter@rrcc.edu. You will be required to present a government-issued photo ID to take the Accuplacer and must begin the test at least two hours before the Assessment Center closes.

We strongly recommend you review the online study guides available before taking the placement test. The study guides can be found at www.rrcc.edu/assessment. Your score is an indication of the level of coursework you are ready to take. You are responsible for completing basic skills courses during your first 30 credit hours of attendance if your placement scores are below college level.

Students enrolling in Fire Science or Emergency Services coursework must consult the Emergency Services Department for their placement requirements.

You may be exempt from taking the placement test if you have satisfied one of the following requirements:

- Taken the ACT or SAT placement test within the past five years. Please check our website to see if your scores exempt you from this requirement. Submit your score report to RRCC Student Records.
- Earned an Associate of Arts, Associate of Science, or higher degree from a regionally accredited college or university. You must submit your transcripts to the RRCC Student Records Office.
- Have qualifying AP or IB test scores. You must submit your transcripts and/or score reports to RRCC to be exempt from taking the corresponding sections of the test.
- Registered for a non-guaranteed transfer course for which placement scores are not required as a prerequisite.

Please note that English courses taken outside of the United States do not meet the placement requirements.

**Information: 303-914-6727 www.rrcc.edu/assessment.
Arvada Campus Assessment: 303-914-6075.**

5. Meet with an academic advisor.

An advisor will help you select courses, identify course prerequisites, obtain program information, evaluate placement results, assist with transfer planning to a four-year college or university, and prepare you for graduation. They can check your progress in AA, AS, AGS, and AAS degree plans, and develop a course schedule that fits your needs and academic goals. A team of academic advisors, on both the Lakewood and Arvada campuses, is available year-round by appointment. An important step toward succeeding at RRCC is meeting regularly with an academic advisor. **Information: 303-914-6275 or www.rrcc.edu/advising.
Arvada Campus Advising: 303-914-6010.**

6. Register for classes.

You may register for classes in person at the Lakewood or Arvada campus or you may register online. Go to www.rrcc.edu and click on "The Rock." Enter your student ID (S number) and password. Click on "Add or Drop Classes." Follow directions to register for your classes.

Although we can't register you over the phone, we can guide you

through the process. Please contact us should you have any questions. Remember to print your schedule a few days before the semester begins to get current room information.

Information: 303-914-6348 or www.rrcc.edu/apply-now

7. Get your RRCC Student ID card. (Student IDs are not issued to students taking only online courses.)

You will need a photo ID and a copy of your current schedule, which you can get online or in Admissions. It is possible to get a preferred name on your student ID. Preferred Name Change: If you go by another name than the legal name on file with the college, you can update this information by emailing your legal name, S#, and preferred name from your college-issued email address to student.records@rrcc.edu.

Information: 303-914-6370

8. Activate your student email account.

Your college email account is the official method of communication at RRCC, so it is extremely important that you activate your account and check it frequently. To activate your account, log in to "The Rock" and click the "Student Email" link at the top of the page. Activate your account today at www.rrcc.edu/admissions/student-email.

9. Log in to the Portal and review your student account.

You should familiarize yourself with your student account whether you are paying on your own, expecting financial aid, or a third party is covering your balance. Through your portal, you can make payments to your student account by using a credit card, or you can set up an affordable payment plan. The sooner you sign up for a payment plan, the lower your payments will be. If you are receiving financial aid or a third party is paying your account, you can monitor whether the payment has been posted.

Whether you are receiving financial aid or not, you should also select a refund preference. Watch your mail for an envelope containing your refund preference kit from BankMobile (do not mistake this for junk mail). This envelope contains information on how to select your refund preference. When you receive the kit, go online to www.refundselection.com and use the included personal code to activate a refunding preference.

There are many options to manage your student account through your portal/student account tab in the Rock. Take the time to look around, and check payment policies and due dates. If you have questions, please contact the Cashier's office. They are happy to help.

What else should I do?

1. Purchase books and supplies.

The RRCC Bookstore, located on the Lakewood campus, is your source for all of your educational materials, including those for CCCOnline classes. Books can be ordered and delivered to the Arvada campus with adequate notice. To use up to \$750 of your expected financial aid refund at the campus bookstore, contact the Financial Aid Office to see if you qualify, and complete the Bookstore Authorization Form with Financial Aid.

Information: Lakewood campus 303-914-6232 or Arvada campus 303-914-6022 www.rrcc.bncollege.com

2. Apply for a Red Rocks Community College scholarship.

Information: 303-914-6426 or www.rrcc.edu/scholarships

3. Check-in with Accessibility Services.

If you are a student with a disability, contact Accessibility Services at **303-914-6733** for support or accommodations. **The Arvada Campus is by appointment only: 303-914-6733.**

4. Stay current with RRCC.

Like and follow us on Facebook, Twitter, LinkedIn, and Instagram. You'll never miss important information about events or guest speakers visiting campus.

Admissions Policy

Students seeking admission to Red Rocks Community College should submit an application for admission online at www.rrcc.edu/apply. Staff is available to assist you with completing the application on site in the Admissions office at the Lakewood campus and at the Arvada campus. The College practices an "open door" admissions policy, which means that entry is generally unrestricted; however, the college reserves the right to place students in classes on the basis of academic advising, testing, pre-enrollment interviews, and past educational achievement. Certain college programs have specific admission requirements as well. The following minimum requirements are used as guidelines for admission:

1. All individuals, 17 years of age or older, who have a high school diploma, a General Education Development (GED) certificate, or are not enrolled in high school, are admitted upon completion of the RRCC admissions applications.
2. Students younger than 17 and who are not currently in a high school concurrent enrollment program may be considered for underage admissions by completing a "Request for Waiver of Admissions Requirements for Underage Students" (available online www.rrcc.edu/high-school-relations/underage-enrollment). Students must complete the Accuplacer test and an admission decision will be based on a student's academic history, determination of ability to benefit from college level instruction, and overall educational goals.
3. Most new students must take the placement test or have appropriate ACT or SAT scores from a test taken within the last five years. State Board Policy requires that colleges assess their students to determine their levels of English, mathematics, and reading, and if needed, that students take developmental courses within their first 30 hours at the college.

All new students must meet assessment requirements, which can be accomplished in one of the following ways:

- Evidence of a C or higher in prior college-level English and math courses. (Please note that English courses taken outside the United States do not meet the Assessment or Transfer guidelines.)
- Placement scores will be used to determine placement in both college-level and academic enrichment courses as appropriate. Please see the current class schedule for placement and prerequisite requirements.

All degree- or certificate-seeking students must meet assessment requirements. All students seeking to register for a course with prerequisites must meet assessment requirements (regardless of degree/certificate status).

Admission to the college does not assure acceptance of a student into a particular course or program. Some students may need to enroll in certain courses to compensate for scholastic deficiencies or to meet established prerequisites. The college reserves the right to review and revoke the enrollment of any person who appears to be unable to profit from further education, as well as of those persons whose enrollment would not be beneficial to them or to the college and in accordance with Board Policy BP 4-10. The policy is online at: www.cccs.edu/policies-and-procedures/board-policies/bp-4-10-admission-continued-enrollment-and-re-enrollment-of-students.

Students who enroll in an occupational program, who are veterans, who receive financial aid, or who are on F-1 or M-1 student visa status must declare their degree or certificate program at the time of registration. Any changes in the declared degree or certificate must be recorded with the Admissions office and, if the student is a financial aid recipient, with the Financial Aid office.

RRCC does not require physical examinations as a condition for admission. Disabled students are encouraged to contact Accessibility Services at 303-914-6733. This office provides support and accommodations (at no cost) to students with disabilities. Students who had an Individual Education Plan (IEP) or 504 Plan in high school are encouraged to contact Accessibility Services after applying for admission to the college.

Student Types

New Students

Your first step for enrolling at Red Rocks Community College is to complete the online application for admission. Please see the Getting Started steps (p. 14) and the Admissions Policy (p. 15) for additional information.

New students should take advantage of the support services and programs offered through the First Year Experience program. Learn more about the program at www.rrcc.edu/fye.

Re-Admit Students

Former students returning to RRCC after an absence of three or more consecutive semesters must complete the online application. Please see the Getting Started steps (p. 14) and the Admissions Policy (p. 15) for additional information.

Transfer Students

Students who have previously attended any college must complete the RRCC application for admission and meet assessment requirements. Transfer students should meet with academic advisors to register for the first semester and are encouraged to keep in contact with academic advisors. To initiate the transfer process, RRCC's Transcript Evaluator will transfer in appropriate courses after students have completed the following:

1. Request that all colleges previously attended send official transcripts to:

RRCC Student Records
Red Rocks Community College
13300 West 6th Avenue, Box 8
Lakewood, Colorado 80228

2. Declare a program of study
3. Submit Transfer Credit Evaluation Request Form

Guest Students

A student from another college and plans to attend RRCC for one semester only.

Information: student.records@rrcc.edu or www.rrcc.edu/student-records

High School Students

Participating in the Concurrent Enrollment Program

Concurrent Enrollment is a program that allows RRCC to partner with school districts to offer college classes to high school students. High school students enrolling under the Concurrent Enrollment program need to complete the following steps:

1. Meet with your high school counselor.
2. Complete the RRCC, College Opportunity Fund, and Concurrent Enrollment applications.
3. Complete the Accuplacer test or provide ACT or SAT scores that meet the prerequisites.

Registration dates and times will be scheduled for students who have completed the Concurrent Enrollment Agreement and are approved by the school district to register for RRCC classes. Check with your school district for information related to tuition and fees.

Concurrent Enrollment students who take classes on the RRCC campus must sign the Student Payment Agreement. Tuition may be paid by the school district, but the student may be responsible for fees. If the student is under 18, a parent or guardian must also sign the payment agreement.

Not Participating in the Concurrent Enrollment Program

Students need to complete the following steps:

1. Complete a new student application for admission and sign up for the College Opportunity Fund (COF).
2. Complete the RRCC placement test or provide ACT or SAT scores that meet prerequisites.
3. Meet with a representative from High School Relations to register for classes.
4. Pay for tuition, student fees, books, and supplies.

Students who take classes not covered by Concurrent Enrollment with their school district must sign the Student Payment Agreement. If the student is under 18, a parent or guardian must also sign the payment agreement.

Students under the age of 17 are required to submit a Request for Waiver of Admissions Requirements for Underage Students. Call admissions at **303-914-6600** to begin the process.

For additional information, call the **High School Relations office at 303-914-6350**.

International Students

International students are those students admitted into the U.S. on an F1 non-immigrant student visa. If you are an international student, submit the following documents:

1. RRCC "**International Student Admissions Application**," available in the International Student Services Office, or the application may be downloaded from our website at www.rrcc.edu/international. International students must not use the electronic application on the college main web page.
2. A statement of financial resources sufficient for tuition and living expenses while in the U.S. (currently \$34,500/year based on tuition of \$8,000/full time per semester). Tuition and fees are subject to change without notice. After the admissions materials have been reviewed, we will issue the U.S. Immigration Form I-20 to qualified applicants. Applicants outside the U.S. must then present the I-20 and original copies of financial support documents to the nearest U.S. consulate or embassy to obtain the F-1 visa.

Upon arrival in the U.S., you will be enrolled in the mandatory health insurance through the RRCC international student health insurance provider.

Application Deadlines

International students should apply as early as possible in order to allow sufficient time for the college to assess all necessary documents and for the U.S. State Department's visa interview process. The following deadlines are application submission guidelines for new international students only. Transfer students already in the U.S. generally have one additional month to prepare their documents.

Fall Semester: June 1

Spring Semester: November 1

Summer Semester: March 1

New applications are not accepted after classes begin.

Assessment

Prior to registering for classes, you must take a placement test and/or an English language assessment. The English language assessment can be arranged to be taken remotely outside the United States or in person at the college upon arrival. Depending upon your test results, you will then be placed in the English as a Second Language program or college-level classes as appropriate.

Guaranteed Transfer to Universities

Many RRCC courses will transfer. Please consult with an RRCC academic advisor as well as a transfer counselor at the institution you wish to attend. Credit earned for prior learning, advanced placement, correspondence courses, CLEP, and other credit from "testing out" of a course may not apply. The institution to which you transfer will evaluate these credits according to its own policies. See Transferring from RRCC (p. 19) to Four-Year Colleges and Universities.

Intensive English Program

If you wish to study only English as a Second Language or continue with college-level courses after ESL studies, you may enter our Intensive English Program. The program offers full-time English instruction (20 hours per week + tutoring) at the beginning, intermediate, and advanced skill levels.

Non-Intensive English Program

If you have tested beyond the Intensive English Program, you are eligible to enroll in non-intensive English classes. The program offers four semester-length classes designed to boost your English skills for the reading, writing, and communication demands of college classes. Classes include advanced reading, composition and listening/speaking, conversation, and iBT TOEFL preparation.

Information: 303-914-6416 or www.rrcc.edu/international

Warren Tech Students

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRCC students pursuing certain career and technical college degrees and/or certificates may take courses (on a space-available basis) at Warren Tech (WT), which is adjacent to the RRCC campus. You must have graduated from high school, received a GED, or attained the age of 21. You pay RRCC tuition and WT program fees at the RRCC Cashier's Office and your coursework is recorded on your RRCC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start, and end dates differ from those of RRCC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m.

Warren Tech Admission Steps:

1. Apply for admission to RRCC at: www.rrcc.edu/apply-now.
2. Take the placement test at RRCC and pick up a WT application at the RRCC Admissions office. For assessment hours and information, go to www.rrcc.edu/assessment. Students may submit SAT/ACT scores or college transcripts in place of test scores (see exemptions to admissions requirements in the Admissions Policy (p. 15) section).
3. Attach the placement test results to the completed WT application and submit to the WT Counseling Office for placement on the waitlist.
4. Wait to be notified of acceptance from WT.
5. Upon acceptance to WT, make an appointment with the WT liaison in the RRCC Admissions office at 303-914-6543 to register for courses.
6. Pay RRCC tuition and fees and the additional WT program fee at the RRCC Cashier office. Call 303-982-8600 for current WT program fee information.
7. For financial aid information, visit Financial Aid or www.rrcc.edu/financial-aid.

Warren Tech Information Guides and applications are available at WT or RRCC. For more information:

- Visit the counseling website at www.warrentech.org or
- Contact the RRCC-WT Liaison at 303-982-7677 or
- Contact the RRCC Admissions Office at 303-914-6543.

Admissions and registration requirements can be obtained from either office.

The following WT programs are available to RRCC students on a space-available basis:

Auto Collision Repair

Auto Customization

Automotive Technology

Cosmetology:

Esthetician (esthetics-skin care)

Hairstylist

Nail Technician

Dental Assisting

Power Equipment and Sport Vehicle Technology

Precision Machining Technology

Welding

Western Undergraduate Exchange Students (WUE)

WUE is a program of the Western Interstate Commission for Higher Education (WICHE). Students who are residents of WICHE states or the Commonwealth of the Northern Marianas Islands (CNMI) may enroll at participating two- and four-year college programs outside of their home state or territory at a reduced tuition rate. WICHE states include Alaska, Arizona, California, Colorado, Commonwealth of Northern Marianas Islands, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. If you are a resident of a WICHE state or CNMI, you can study at RRCC or any one of the 135+ participating schools in the west and pay reduced tuition. Please see restrictions below:

- WUE/WICHE students are not eligible to participate in the College Opportunity Fund (COF) program.
- A student participating in the WUE/WICHE program may not use the time in Colorado to fulfill the physical presence requirement for in-state tuition. Bachelor of Applied Science (BAS) degrees are not eligible for the WUE tuition rate.
- The Physician Assistant (PA) program is not available for this program, but PA students may qualify for the Professional Student Exchange Program (PSEP), which enables students to enroll in selected out-of-state professional programs because those fields of study are not available at public institutions in their home states. Please note that residents of California, Oregon, and South Dakota are not eligible to enroll through PSEP. Information is available at www.wiche.edu/psep.

Information: 303-914-6358 or <http://www.wiche.edu>

Prior Learning Assessment (PLA)

You may receive academic credit for education earned through earlier schooling, work experience, experiential learning, or other non-traditional means. It must be comparable to courses offered at RRCC and related to your current degree or certificate program. Methods available for obtaining PLA credits are the following:

- Certificates (earned through academic, vocational and/or professional programs).
- Portfolio (documentation of past experiences and/or learning).
- Institutional Challenge Examination.

Course credit is granted once reviewed and appropriate documentation, approval, and payments are received.

Information: 303-914-6727 or www.rrcc.edu/assessment/credit-for-prior-learning

Residency

Residency Classification for Tuition Purposes

At the time of application for admission, students are classified for tuition purposes as "in-state residents" or "out-of-state residents," according to provisions of Colorado law. To qualify for in-state tuition, students (or their parents or legal guardians, if they are under 23 years of age and not emancipated) must have been domiciled in Colorado for at least one year prior to the first day of the semester for which they seek residency.

Domicile for tuition purposes is determined by two factors:

1. Ability to show a permanent place of residence in Colorado, and
2. Ability to demonstrate intent to remain in Colorado.

Students prove their intent by providing documents showing 12 months of domicile in Colorado. Examples are:

1. Colorado income tax returns
2. A lease or rental agreement for one year
3. Proof of purchase of a home for one year
4. Evidence of permanent Colorado employment status
5. A Colorado driver's license or vehicle registration
6. Evidence of Colorado voter registration

The Student Records office requires a minimum of **two** proofs of domicile, but depending on circumstances, RRCC may request additional information. If students have been classified as non-resident and feel this is in error because of incorrect information provided on the initial application, a correction form must be submitted by the full semester drop deadline for the semester. If it is determined that the correction form and any supporting documentation is insufficient to prove residency, the student can petition for in-state tuition. This petition must be submitted to Student Records within 30 days of the start of the semester.

All Veterans who have been honorably discharged can be classified as "In-state" for tuition purposes with a copy of the Veteran's DD-214.

Information: 303-914-6358

Military Science (U.S. Army ROTC)

The Military Science Program at RRCC is offered in conjunction with the University of Colorado at Boulder (CU-Boulder). The Department of Military Science offers programs leading to an officer's commission in the active Army, Army Reserve, or National Guard in conjunction with an undergraduate or graduate degree. Military science courses supplement a regular degree program by offering practical leadership and management experience. Students attend classes at either University of Colorado at Boulder, Colorado School of Mines in Golden, or Metro State University of Denver.

RRCC Information: 303-914-6600

CU-Boulder AROTC Information: 303-492-6495 or www.colorado.edu/arotc

Mines Academy

The Mines Academy at Red Rocks Community College is a unique opportunity for students to earn guaranteed admissions to Colorado School of Mines. This joint Red Rocks Community College and Colorado School of Mines program provides a seamless transfer experience and an affordable pathway to any of the undergraduate engineering and science degrees at Mines. Students in the program benefit from academic support, resources, community and engaged learning opportunities on both campuses. Students are eligible to join the Mines Academy when they are ready to take Calculus I. Students who are accepted, meet all criteria, including an overall 3.25 GPA in the Mines Academy required courses, are guaranteed admissions to Colorado School of Mines.

Additional highlights of the program include:

- High-quality math, science, and engineering courses at RRCC with small faculty-student ratios
- An engineering community with academic peers who support each other both at RRCC and Mines
- Unique programs such as Honors-to-Honors transfer
- Engagement in the IDEA Lab

More information: www.rccc.edu/engineering/mines-academy

Student Academic Travel

Red Rocks Community College offers transformative travel and study abroad opportunities that blend accredited academic coursework with co-curricular travel. Faculty from various departments organize trips for their students to offer real-life learning opportunities. Class credit is generally offered to fulfill a general education requirement.

Passport Services are available through International Student Services & Programs. Email: international@rccc.edu.

Both international and domestic travel study opportunities are available. Explore the list of upcoming trips at www.rccc.edu/student-academic-travel.

Transcripts

Red Rocks Community College has authorized Parchment to manage the ordering, processing, and secure delivery of official student transcripts. Ordering through Parchment provides you with the convenience of ordering your transcript online, 24/7.

Current students can order their transcript through the Student tab in The Rock portal and clicking on "Request Official Transcript". This will lead you to Parchment, where the information from your RRCC account will upload to create a permanent account.

Former students can order their transcript online by going to the Student Records page of our website, www.rccc.edu/student-records and clicking on the Order Your RRCC Transcript button. Follow the link to Parchment's website, where you will create your Parchment account to order your transcript.

Transcripts can also be ordered by coming into the Lakewood campus or sending in a transcript request form, which is found on the Student Records page of our website www.rccc.edu/student-records. The form can be sent to us via fax or regular mail directly to our Cashier's Office.

Transcripts will not be released for students with financial or other obligations to any CCCS (Colorado Community College System) institution.

Information: transcripts@rccc.edu or www.rccc.edu/student-records

Transfer of Credits

If you are pursuing a degree or certificate and wish previous college credits to be considered for transfer, submit official transcripts to Student Records no later than the semester preceding graduation. If you plan to graduate at RRCC and would like to apply transfer credit from other institutions to your RRCC certificate or degree requirements, please complete the Transfer Credit Evaluation Request form no later than the semester preceding graduation and submit official transcript to Student Records.

Red Rocks Community College will evaluate transfer credits earned at a regionally accredited institution of higher education to determine if those credits will be accepted in transfer. Please see the transcript evaluator in Student Records for additional information or consult the Colorado Community College System "Credit for Prior Learning Handbook."

The Colorado Community College System (CCCS) uses a common course numbering system to simplify transfer to other Colorado state colleges and universities and to ensure curriculum quality across the system. Information is posted at www.cccs.edu. Once you are on the site, select "Common Course Number System".

Your previous college credits will be transferred in according to the following policies:

- Students must complete the Transfer Credit Evaluation Request form in order for credits to be transferred in to RRCC.
- Initial transcript evaluation is completed in Student Records.
- The overall grade point average (GPA) or individual classes from transfer institutions are not calculated into your RRCC GPA.
- An unofficial transcript can be evaluated to override prerequisite requirements.
- RRCC reserves the right to examine all credits to determine obsolescence of content. In the event that coursework is found to be obsolete, you may be required to update the credit.
- The college will accept transfer credit only from post-secondary institutions accredited by one of the six regional accrediting associations. Credits earned in a Colorado community college that are applicable to a specific associate degree or certificate will be accepted in an equivalent program.
- Credits will be transferred based on the Degree/Certificate you are pursuing or have identified on the Transfer Credit Evaluation Request form. Although there is no limit to the number of credits that may be transferred, a minimum of 25% of the credits applied to a degree, or 50% for some certificates, must be earned at RRCC. For this reason, we will only initially bring in up to 75% of the needed credit towards the declared degree or identified program. Additional credits may be brought in at the request of the student and/or a faculty member or academic advisor.

- A grade of C or higher is required for transfer. Transfer credit will not be awarded for courses with D, F or U grades. P or S grades may only be transferred if the transcript key indicates that they are equivalent to a C or higher.
- All course work is evaluated on the semester hour basis: i.e. 1 quarter hour equals 2/3 of a semester hour; 1 semester hour equals 1 semester hour.
- Courses taken for a lower credit value than the equivalent RRCC course will only be transferred in at that lower credit value. Courses taken for more credits will only be granted the standard hours for the RRCC course.
- All received and/or evaluated transcripts become the property of RRCC.
- Only classes that pertain to your degree/certificate, with grades of C or better, will be accepted for transfer. If you are pursuing a degree or certificate and wish previous college credits to be considered for transfer, submit official transcripts either sent from a previous institution or hand-carried in a sealed admissions envelope to Student Records as soon as possible after registering for classes.
- Credits for remedial non-collegiate level courses are not acceptable in transfer. They may be used to meet a prerequisite requirement for a higher-level class.
- Upper level undergraduate courses can only be accepted in transfer if the course can be equated to a course in CCNS or can be applied to one of the BAS degrees. Graduate level courses cannot be accepted in transfer towards undergraduate credit.
- Credit for Advanced Placement (AP) is evaluated by Student Records at RRCC. AP credit is evaluated on receipt of an official copy of the score report mailed directly to RRCC from the College Board. Exams for which a score of 3 or better has been earned will be considered for credit. A maximum of 30 semester hours of PLA credit may be applied to RRCC Associates degree. Transfer credit is not granted for AP if the student has completed an equivalent RRCC course. Transfer credit is not awarded for all AP exams. Please contact Student Records at RRCC for more information or see the College PLA Handbook at www.rrcc.edu/assessment/credit-for-prior-learning
- Credit for General/Subject Exams of the College Level Examination Program (CLEP) will be considered for credit on receipt of an official copy of the score report mailed directly to RRCC from the issuing organization. Only scores of 50 and above will be considered. Up to 30 credits of CLEP credit may be applied to RRCC Associate degrees. CLEP is not transferred in if a student has completed an equivalent RRCC course. Transfer credit is not given for all CLEP exams. Please contact Student Records at RRCC for more information or see the College PLA Handbook at www.rrcc.edu/assessment/credit-for-prior-learning
- For Associate of Applied Science degrees/certificates, students should contact their faculty advisor or department chair for information concerning course substitutions.

Please allow 30 days for your transcript to be processed.

Information: student.records@rrcc.edu or www.rrcc.edu/student-records

Transferring from RRCC to Four-Year Colleges and Universities

Courses and programs at RRCC may transfer to the following institutions. You should consult with an RRCC advisor early in your program of study to discuss transferring to a four-year college or university as requirements and agreements may change.

Adams State College
 American Public University System
 Argosy University
 Ashford University
 Bellevue University
 Capella University
 Colorado Christian University
 Colorado School of Mines
 Colorado State University:

- Fort Collins
- Pueblo

CSU Global

Colorado Mesa University

Colorado Technical University

DeVry University

Fort Lewis College

Franklin University

Johnson & Wales University

Jones International University

Kaplan University

Metropolitan State University of Denver

Regis University

St. Francis University

Strayer University

University of Colorado:

- Boulder
- Colorado Springs
- Denver
- Anschutz Medical Campus

University of Northern Colorado

University of Phoenix

Western Governors University

Western State Colorado University

These agreements specify how Red Rocks courses transfer and identify their equivalents at these institutions. They are written guarantees of transferability when a prescribed curriculum is satisfactorily completed.

Information: 303-914-6255 or www.rrcc.edu/transfer-guide

Statewide Transfer Policy and Student Bill of Rights

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

- A quality general education experience that develops competencies in reading, writing, mathematics, technology, and critical thinking through integrated arts and science experience.
- Students should be able to complete their Associate of Arts and Associate of Science degree programs in no more than 60 credit hours or their baccalaureate programs in no more than 120 credit hours, unless there are additional degree requirements recognized by the commission.
- A student may sign a two-year or four-year graduation agreement that formalizes a plan for the student to obtain a degree in two or four years, unless there are additional degree requirements recognized by the commission.
- Students have a right to clear and concise information concerning which courses must be completed successfully to complete their degrees.
- Students have a right to know which courses are transferable among the state public two-year and four-year institutions of higher education.
- Students, upon successful completion of core general education courses, should have those courses satisfy the core course requirements of all Colorado public institutions of higher education.
- Students have the right to know if courses from one or more public higher education institutions satisfy the student's graduation requirements.
- Credit for completion of the core requirements and core courses shall not expire for 10 years from the date of initial enrollment and shall be transferable.

Paying for College

Financial Obligations of Students

Payment dates for tuition, fees, and materials are published in the current class schedule and online. Due dates are based on when you register, regardless of when the class begins. Upon registration, either online or in person, you are required to sign a student payment agreement. By signing the agreement, you are agreeing to RRCC's financial policies. You are financially obligated for full tuition and fees for all classes you have not officially dropped by the drop/refund date ("Census" date). A copy of the student payment agreement is located at www.rrcc.edu/tuition/payment-policy.

If at any point during an academic year, some or all of the instructional formats change due to an emergency situation affecting college operations, public safety, or public health tuition and fees will remain in place regardless of any changes in instructional format. Tuition and fees will not be refunded in the event the curriculum delivery format changes for any part of the academic year.

College Opportunity Fund (COF)

The College Opportunity Fund (COF) is for undergraduates and is a state-funded program that provides a per-credit subsidy for residents attending state-supported and participating private colleges and universities. This money, referred to as the COF stipend, is applied to an in-state student's tuition, provided **the student applies for and authorizes its use**. The college you are attending will receive the money and it will appear as a tuition credit on your bill. COF rates are set annually by the Colorado General Assembly. If you do not apply for and authorize its use, you are responsible for both the student share and the state share of all tuition and fees. Please view your tuition bill each term to ensure the COF stipend has been correctly applied to your account. Apply online during the college application process or by going to www.rrcc.edu/college-opportunity-fund and clicking on "Sign up here!." Be sure to authorize COF when you register for your classes.

Information: COF@rrcc.edu or 303-914-6358

Financial Aid

Financial aid can help you pay for the classes that are required by your declared RRCC program of study. The amount of aid you may receive is based only on the classes you take that are required to earn your RRCC degree or certificate. Meet with your Pathway Advisor before the semester begins to make sure you're in the correct degree program and taking eligible classes.

Most of our students receive some type of financial aid each year. Four types are available:

- Grants are based on financial need and do not need to be repaid.
- Loans must be repaid, with interest, unlike scholarships and grants.
- Work-study allows you to work for the college while you are enrolled.
- Scholarships are generally based on academic performance, accomplishments, and need, and require a separate application.

The Financial Aid Office can provide details for the following:

- Local and regional scholarships
- Federal Pell Grants, Federal Supplemental Educational Opportunity Grants (FSEOG), Colorado Student Grants (CSG), Colorado Career and Technical Education (CTE) Grants, Colorado Graduate Grants, Federal Direct Student Loans, and Federal Direct Parent Loans (PLUS).
- Federal and Colorado Work-Study Program

We should receive your financial aid application (FAFSA) within 3-5 business days after you submit it at studentaid.gov. You can submit your FAFSA throughout the year beginning October 1 the year before fall classes start. However, we recommend applying by April 15 to be considered for the best types of funding, which is often awarded on a first-come, first-served basis. To send your FAFSA to RRCC, use federal school code **009543**. Log into The Rock to track the status of your financial aid file. Use The Rock student portal to check for requests for additional information and to view and accept your offered aid. For complete financial aid information, see the Red Rocks Community College website.

Information: www.rrcc.edu/financial-aid, Lakewood/Arvada campuses 303-914-6256, or or email: rrcc.financialaid@rrcc.edu.

Priority Dates to Receive Financial Aid

Apply by April 15 to be considered for first-come, first-served funding, including some grants and work-study. In order to have a financial aid offer in time for the payment deadline, complete your financial aid file 1-2 months before the start of the semester.

Non-Resident Students

For tuition purposes, Colorado law determines whether a student is classified as in-state (resident) or out-of-state (non-resident), based on information provided on the application for admission.

To request a change to resident status, complete a petition form for in-state status online at https://rrcc.formstack.com/forms/tuition_classification_petition. The Colorado Higher Education Residency guide can be accessed online at <https://higher.ed.colorado.gov/frequently-asked-questions>.

Deadlines for submission of the petition are published each semester in the academic calendar. Petitions received after the deadline will not be considered until the following semester.

Changes in classification become effective at the time of your next registration. The final decision regarding tuition status is determined by the Registrar.

Information: 303-914-6358

Tuition Payment

Methods of Payment

- **Pay in full online:** Go to www.rrcc.edu and log in to "The Rock" using your student ID#. Click the Student Finance tab and under Payment Options, choose the "Pay online with a credit card" link. Only MasterCard and VISA are accepted online. To pay with American Express or Discover, please contact the Cashier's Office at 303-914-6222.
- **Pay in full in person:** You can pay by cash, personal check, MasterCard, Visa, Discover Card, or American Express at the Cashier's Office at the Lakewood campus or online using MasterCard or Visa. The Arvada campus does not accept student tuition and fee payments. Pay in full by mail: Be sure to list the student S# and full student name on the check or money order. Mail a check or money order to:
 - Red Rocks Community College
Cashier's Office, Box 2
13300 W. 6th Ave.
Lakewood, CO 80228-1255
- **Current term payment plan:** If you would like to set up a payment plan throughout the term see the information below or go to: www.rrcc.edu/tuition/payment-plans.

- **Financial aid:** If you are receiving financial aid or scholarships, funds will pay into your student account the Monday after the full-term census date (there is a 30-day waiting period for loans for first-time federal student loan borrowers). Scholarships payable to international students have specific IRS requirements. If you are an international student, a portion of your scholarship may be withheld to pay US federal taxes.
- **VA Benefits:** If you plan on using VA benefits to pay your student account, visit our Veteran Office for additional information and to get started. Depending on the type of benefits you fall under, it will determine if the VA will pay RRCC directly or if you will receive payment and then need to pay RRCC.
- **If you are sponsored by a third party:** If an employer, another agency or a High School will be paying your bill, bring a check made payable to RRCC to the Cashier's Office from the sponsor or a letter stating that the sponsor will pay upon receipt of billing before the tuition due date. For more information visit www.rrcc.edu/tuition/third-party-billing.

Returned Check Charge/Credit Card Chargeback

The charge for a returned payment (check or credit card) is \$25. If your check or credit card payment is returned by your bank, you will be required to pay in cash, by certified funds, or with a credit or debit card, at the Cashier's Office at the Lakewood Campus.

Monthly Installment Payment Plan

If you are unable to pay your tuition in full by the due date, RRCC is happy to offer you a monthly payment plan to assist with your budgeting needs and will help you pay your account in full by the end of the term. You must enroll in the plan at the beginning of each semester. Monthly payments may be made using Visa, MasterCard, Discover, American Express, or by automatic withdrawal from a checking or savings account.

This payment plan can only be utilized for the CURRENT semester. It cannot be used to pay a past due balance, or a collections balance.

There is a \$35.00 non-refundable enrollment fee per semester.

Simple steps to enroll:

Go to www.rrcc.edu

1. Log into your "the Rock" account
2. Select the Student Finance tab
3. Under Payment Options & Refunds tab select "NBS Payment Plan"
4. Select "Sign up for a Payment Plan"
5. Follow the instructions to get set up

Once you have your account set up, you can access it anytime by following the same steps you used to sign up for a payment plan via the Rock. Once you've logged in, you can access the following tools:

- You can view your balance due, payments made, increases or decreases to your tuition and fee amounts, and other account information.
- If someone will be paying tuition and fees on your behalf, you can add an "Authorized Party" to your account. If you would like to make a payment towards your tuition and fees in addition to your scheduled payment, you can do so by using the "Make a Payment" option of your NBS account. This payment will reduce your next scheduled payment by that amount.
- If your account is in good standing, you will not be subject to late fees or holds.
- If your account is NOT in good standing, a hold will be placed on your account and will not be removed until the account is brought current or until the balance due has been paid in full.
- If your payment plan is terminated due to non-sufficient funds or non-payment, your student account will be placed on hold, assessed additional late fees and if you have registered for the next term your courses will be dropped.
- Check the website at www.rrcc.edu/tuition to familiarize yourself with the plan and to enroll. If you are under 18, your parent or legal guardian must sign up for the plan.

When to set up the Payment Plan

The sooner you sign up the better! The payment plan will be open at the start of the registration period and throughout the term. Your total charges will be divided into multiple payments and the number is dependent on when you sign up for the plan. The longer you wait the larger your payments will be, and a 25% down payment will be required. Payment plans that require a down payment will have those payments processed immediately.

Be sure to check your account online throughout the term to ensure your payments are correctly posted to your student account. If your financial aid is delayed for any reason, sign up for the payment plan to avoid financial holds, late fees and potential collection action. Any amount your financial aid pays above what you owe, will be refunded.

Payment Policy

Each term the official due date is listed in the academic calendar. Payment in full or approved alternative payment arrangements such as the payment plan, financial aid or third-party sponsor (company or high school) need to be in place by the official due date.

- If registration occurs before the full-term drop date, payment is due by the full-term drop date regardless of when the class starts.
- If registration occurs after the first official due date, payment is due in full by the fifth of the following month.

All accounts not paid in full by the due date are subject to late fees. All accounts not paid in full by the last day of the term are subject to collection action. Late fees are based on when you register, not when the class starts.

Refund Policy

A refund is initiated when the account is at a credit balance. Refunds are processed at the beginning of each week and availability of your funds depends on the refund preference you have selected.

- Refunds of payments made by credit card are first refunded to the original payment credit card.
- All remaining refunds are processed through BankMobile, a financial services company. For more information about BankMobile, visit: <http://bankmobiledisbursements.com/refundchoices/>. Once you receive your BankMobile Refund Selection Kit in the mail, you must go online to select your refund preference. Make sure you select a preference as soon as possible and keep your demographic information current with BankMobile.
- Your refund will not include Barnes and Noble bookstore charges for items you purchased at the bookstore. Please check with the bookstore regarding any refunds for items purchased there.
- The \$35 Installment Tuition Payment Plan fee is non-refundable.
- Only classes dropped by the course drop/refund date are eligible for refund. If you withdraw from a class, you are still responsible for the charges.

Understanding your student account

The online Academic Calendar (p. 7) will include important payment, late fee, and hold dates.

Unless you are on a payment plan through our third party payment processor, expecting financial aid or a third-party sponsor is paying your bill; payment in full is due no later than the due date listed in the calendar regardless of when your class starts. If your balance is not paid in full or arrangements have not been set up by the scheduled due date, you will be subject to late fees and account holds.

Do not wait for a bill in the mail to make a payment. Paper bills and email bills may be sent each term but it is your responsibility to know when your payment is due. Your student account information is available online so you can check your account balance, make payments or set up a payment plan in the portal 24 hours a day. Log in to "The Rock" using your student ID#. Be sure to activate your student email address and check it regularly. Your student email address is the primary method we will use to communicate with you regarding your student account, due dates, late fees and holds.

Please feel free to email: cashiers.office@rrcc.edu from your student issued email address with any questions regarding your account or stop by the Cashier windows at the Lakewood campus.

Financial Holds

Accounts that are not paid in full or have payment arrangements set up, will have a financial hold added on the date listed in the schedule. A financial hold will prevent you from registering for other classes and keep you from withdrawing or dropping from classes online.

If you have a hold you will only be able to drop or withdraw from classes for the current term by sending an email to: admissions@rrcc.edu or going to the admissions counter to complete a form PRIOR to the published deadline. No drops are processed by phone. A hold will also prevent you from receiving an official transcript or receiving your diploma. If you do not drop your course(s) by the scheduled drop date and then choose to withdraw, you will still be responsible for paying the course charges in full. A hold will affect you at RRCC as well as all colleges within the Colorado Community College System (CCCS).

Late fee policy

Late Fees: Accounts that are not paid in full or do not have alternative payment arrangements set up by the due date are subject to monthly late fees. The initial late fee will be \$40, and an additional \$10 late fee will be charged each month your bill is outstanding. Alternative payment arrangements include authorized financial aid in place, a current term Payment Plan set up, or a voucher for a Third-Party Payor turned into the Cashier's Office. If your alternative payment arrangements (financial aid or Third-Party Payor) will not cover your balance in full, then you should pay your portion in full by the due date or set up the payment plan.

COF: If your College Opportunity Fund stipend is delayed, pay your entire balance in full and once the stipend posts to your student account you will be issued a refund.

Late Financial Aid: If your financial aid is delayed and not set to pay by the published payment deadline, your account is subject to late fees.

Consortium: If you are attending RRCC and another institution but receiving financial aid from the other institution you will need to pay your balance in full or be set up on a payment plan by the due date in the academic calendar to avoid late fees. It is your responsibility to make payment to RRCC once you receive the funds from the other school which may occur after our payment due date.

Partial Pay by Financial Aid, Third Party or VA: If financial aid or your third-party sponsor is not going to cover your balance in full you need to set your portion up on the payment plan or pay the balance in full. You do not need to wait for your sponsor to pay their portion in order to pay yours. If you need help determining what you will owe, please contact the Cashier's Office.

High School Concurrent Enrollment: If your high school does not cover the balance in full, you will need to pay your portion before the due date, or your account will be subject to late fees. If you need help determining what you will owe, please contact the Cashier's office.

Tuition Credit: If you have been awarded a tuition credit, you will need to pay the fees and your portion before the due date, or your account will be subject to late fees. Tuition credit will be applied after the due date. If you need help determining what you will owe, please contact the Cashier's office.

Late Fee Appeal: If you feel you have been charged a late fee in error, send a message to the Cashier's Office email. Late fee appeals will not be reviewed unless the balance is paid in full. If it is found that the account was charged in error, it will be removed and refunded.

How to avoid a hold and late fees:

- Sign up for the monthly installment payment plan. All accounts in good standing will automatically have the hold removed.
- Turn in your third-party voucher early.
- Pay your account in full before the due date.
- Pay your portion before the due date.

Drop for Non-Attendance

Do not assume you have been dropped from a class for non-attendance.

You are responsible for dropping a class before the drop date or you will be responsible for full payment. If you do not attend the first day of class, or any class sessions between the start of the course and the drop (census) date of the course, you will be identified as a "no-show" student by the faculty member and dropped from the course. Being dropped as a no-show student can have significant negative consequences for students using financial aid and/or veteran's benefits. Students who are dropped for non-attendance will not be permitted back into the course.

You may drop a class online or by emailing admissions@rrcc.edu from your college-issued student email account or by coming in person to the Admissions Office. **Drops may NOT be made over the phone.**

Drops/Withdrawals/Cancelled Classes

You **will not** be dropped for missing payment deadlines and outstanding balances are subject to late fees.

- RRCC does not drop for non-payment.
- You are responsible for dropping your classes, and drop dates vary by class. Please review the schedule to ensure you know the specific drop and withdrawal dates for each course in which you are enrolled.
- If you do not drop your class by the date noted in the schedule, you may be responsible for the full cost of the course.
- If you withdraw from a course after the drop date, you are responsible for the charges associated with that course.
- If a course is cancelled by the college, you are eligible for a 100% refund of the tuition and fees you have paid for that course. Your refund will be issued per the refund policy, but your financial aid amounts may also be reduced.
- Drops and withdrawals can impact your eligibility for financial aid in future terms, and may result in a balance due at the school.

Past Due Accounts at the end of term

By the end of the term if your account is still outstanding you will have a hold and late fees. You will not be able to register for classes at RRCC or any of the colleges in the Colorado Community College System. You will not be issued an official transcript or receive a diploma until your account is brought current.

Outstanding accounts will be turned over to a collection agency in accordance with Colorado law and you will be required to make payment arrangements with the agency. Collection costs of up to 40% will be added to your account balance and your account may be subject to interest charges at 8% per year in accordance with Colorado law. Your delinquency will be reported to national credit bureaus.

Collection Payments

If your account has been sent to collections, you will need to pay the collection agency directly. Once you have paid the account in full the Cashier's office is notified the next business day. Once this notification is received the financial holds will be removed from the account. If the payment is made by check the collection agency may notify the college after the funds are verified.

For more information you can contact the cashier's office at: 303-914-6222 or cashiers.office@rrcc.edu.

Tuition Rates and Fees

Tuition rates are set annually by the State Board for Community Colleges and Occupational Education. The rates listed are for Fall 2021, Spring 2022 and Summer 2022. For current tuition rates, please check the website: www.rrcc.edu/tuition.

Resident Tuition Rates (Excluding Fees)

See Student Fees.

These rates are effective for Fall 2022, Spring 2023 and Summer 2023

On Campus Tuition Rate	Tuition Per Credit Hour	*COF Stipend Per Credit Hour	Student Share Per Credit Hour
Resident	\$260.40	- \$104.00	\$156.40
WUE - Western Undergraduate Exchange (Associates)	\$234.60	no deduction	\$234.60
Nursing NUR Resident	\$339.30	- \$104.00	\$235.30
Nursing - WUE	\$313.50	no deduction	\$313.50
Bachelors Water Quality Management & Secure Software Development BAS Resident	\$359.15	- \$104.00	\$255.15
Master's Physician Assistant MPAS Resident	\$571.30	no deduction	\$571.30
Online Tuition Rate	Tuition Per Credit Hour	*COF Stipend Per Credit Hour	Student Share Per Credit Hour
Resident Online	\$367.20	- \$104.00	\$263.20
Active Duty Military Online	\$354.00	-\$104.00	\$250.00
Nursing Online NUR Resident	\$442.30	- \$104.00	\$338.30
Bachelors Online Water Quality Management & Secure Software Development BAS Resident	\$359.15	- \$104.00	\$255.15

Colorado state law defines the conditions that qualify you for in-state tuition. Your initial classification is based on information you supply on the Application for Admission. You must live in the state of Colorado for 12 consecutive months before you can apply for reclassification to resident status. The Petition for Residency Reclassification is available in the Admissions Office.

*College Opportunity Fund (COF)

COF is a state-funded program that provides a per-credit subsidy for undergraduate residents attending state-supported and participating private colleges and universities. This money, referred to as the COF stipend, is applied to an in-state student's tuition, provided the student applies for and authorizes its use. The college you are attending will receive the money and it will appear as a tuition credit on your bill. COF rates are set annually by the Colorado General Assembly. If you do not apply for COF funding, you are responsible for both the student share and the state share of all tuition and fees. (You need to apply for COF only once, and you must authorize its use.) Please review your bill each term to ensure your COF stipend has been correctly applied to your account. <https://cof.college-assist.org>

Non-Resident Tuition Rates (Excluding Fees)

See Student Fees (p. 24).

These rates are effective for Fall 2022, Spring 2023 and Summer 2023.

On Campus Tuition Rate	Tuition Per Credit Hour
Non Resident	\$629.25
WUE - Western Undergraduate Exchange (Associates)	\$230.05
Nursing NUR Non Resident	\$643.65
NUR - WUE	\$307.40
Bachelors Water Quality Management & Secure Software Development BAS Non Resident (WUE)	\$610.90
Master's Physician Assistant MPAS Non Resident	\$646.95
Online Tuition Rate	Tuition Per Credit Hour
Non Resident Online / WUE online	\$401.25
Nursing Online NUR Non Resident (WUE)	\$477.40
Bachelors Online Water Quality Management& Secure Software Development BAS Non Resident (WUE)	\$610.90

Note: WUE/WICHE rates are not available for the Physician Assistant Program. <http://wiche.edu/wue>

Student Fees (Subject to Change)

These rates are effective for Fall 2022, Spring 2023 and Summer 2023.

Registration fee: \$15.10 each semester.

Student fees: \$10.97 per credit hour includes: Student Activity fee \$6.82, Student Center Bond fee \$2.68, Parking fee \$1.47. Note: Student fees apply to the first 12 credit hours only. Max Student Campus fees per term \$131.64.

Student Health & Counseling Center fee: \$25.22 (fall and spring semesters), \$12.61 (summer semester). **

Student Recreation Center Bond fee: \$70.00 (fall and spring semesters), \$42.00 (summer semester). Note: The bond fee funds are to pay the bonds used for constructing the building. **

Student Recreation Center Operating fee: \$50.93 (fall and spring semesters), \$30.55 (summer semester). Note: The operating fee funds will pay for the operation and maintenance of the center. **

Instructional Course fee: \$7.85 per credit hour for designated courses.

Cisco fee: \$22.25 per credit hour for designated courses.

CCOnline Labkit fees per class per term for specified courses range from \$125 to \$333.

CCOnline Digital fees per class for specified courses range from \$37 to \$74.

CCOnline Computer Lab fees per class for specified courses range from \$77.50 to \$125.

Late fee: After the due date listed in the academic calendar, regardless of when the class starts, outstanding accounts are subject to a \$40.00 initial late fee and a reoccurring \$10.00 monthly late fee.

Application Fees: International: \$75.00; Physician Assistant Program: \$100.00

Designated Course fees: Please check the current course schedule for specific classes.

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** If you are not being charged, you are not eligible to use these facilities. You may opt in at the Cashier's office.

Academic Matters

Academic Integrity

Everyone associated with the college's academic community has a responsibility for establishing, maintaining, and fostering understanding and respect for academic integrity. The following principles are associated with academic integrity:

- Cite (give credit for) words and/or ideas in an academic exercise that are not expressly your own.
- Use information, computer programs, another person's work, study aids and/or other materials only when allowed by the instructor.
- Remove materials from the library, labs, and other college facilities only when an official representative of the college grants permission.
- Use copyrighted materials only with permission.
- Refuse to help another commit an act of academic dishonesty.
- Use only the resources specifically allowed when completing a test or other assignment.

Academic dishonesty is the intentional act of fraud when an individual claims credit for the work of another, uses unauthorized materials, or fabricates information in any scholarly exercise. Academic dishonesty also includes, but is not limited to:

- forging educational documents
- damaging or destroying the works of another; or
- assisting others in acts of academic deception.

If you are aware of an incident of academic dishonesty, please report the occurrence to a faculty member, department chair, or administrator. Those committing academic dishonesty will be subject to disciplinary action, such as failing the assignment or course and/or expulsion from the course or college.

Academic Progress

Guidelines

All RRCC students are expected to maintain satisfactory academic progress. Recognizing the value of measuring academic progress for all students, RRCC has established the following practice and procedures for measuring 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 at RRCC. A student's academic standing at one Colorado Community College System (CCCS) college will impact academic standing at another CCCS college.

Process

For students who have attempted fewer than 9 credit hours, RRCC will monitor satisfactory progress through an Academic Alert process. These students are not subject to Academic Standing.

Academic Standing applies to all students who have attempted 9 or more credits at a CCCS college, regardless of the number of term credits they attempt from that point forward. Academic Standing is applied consistently and uniformly within each CCCS institution. RRCC will determine Academic Standing following the posting of the majority of term grades for each semester. Students placed on probation or suspended 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. 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 RRCC as it will impact a student's enrollment at other CCCS colleges.

Definitions

- Only college level classes will be used to calculate term and cumulative GPAs (grade point averages).
- This includes summer term courses.

- Only courses taken "in residence" will be used for this procedure; "In residence" means courses taken at RRCC. Courses taken elsewhere and transferred in do not apply. The GPA calculations for this procedure may not match those used for financial aid purposes.

Standards

Initial Standing: Student has attempted fewer than 9 cumulative credit hours with a cumulative GPA that is greater than or equal to 2.00 for all classes attempted.

Academic Alert: Student has attempted fewer than 9 cumulative credits with a cumulative GPA less than 2.00 for all classes attempted.

Good Standing: Student has attempted at least 9 cumulative credit hours and has a cumulative GPA greater than or equal to 2.00 for all classes attempted.

Probation: Student has attempted at least 9 cumulative credit hours and has a cumulative GPA less than 2.00 for all classes attempted.

Returning to Good Standing: By the conclusion of the Academic Probation term, the student must raise his or her cumulative GPA to at least 2.0. If this condition is met, the student returns to Good Standing.

Probation (continuing): If a student on Academic Probation earns a term GPA of at least 2.00 for all classes attempted during the term, but fails to raise his or her cumulative GPA to at least 2.0 for all classes attempted, the student will be allowed to attend the next term, but will remain on Academic Probation.

Suspension: If a student on Academic Probation earns a term GPA of less than 2.0 for all classes attempted, the student 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").

Suspension Rules

- Summer term may not be used as a "suspension term".
- Summer term may be used to remediate (improve) the GPA if approved by RRCC. If a student wishes to enroll for summer term after being suspended, the student will need to follow RRCC's Suspension Reinstatement Procedure.
- 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 after completing a Petition for Re-Entry which is reviewed by an academic advisor. The Petition for Re-Entry can be found at https://rrcc.formstack.com/forms/petition_for_reentry_form.
- A third suspension is for two full years, or four academic terms, excluding summers.
- If a student, who has served the third suspension time of two years, wishes to return, the student will be allowed to re-enroll after completing a Petition for Re-Entry which is reviewed by an academic advisor. The Petition for Re-Entry can be found at https://rrcc.formstack.com/forms/petition_for_reentry_form.

Suspension Appeals

- A student may appeal his or her suspension by completing an Academic Suspension Appeal form and scheduling an appointment with an advisor via Navigate. The appeal form can be found at https://rrcc.formstack.com/forms/academic_suspension. If a student intends to transfer to another CCCS college, the student must appeal to the transferring CCCS college.
- If the student's suspension appeal is approved, the student will be allowed to register but will remain on Suspension status.

- Students put on Suspension will be dropped from all courses for any future terms. Students will not be able to register for courses until they meet the requirements outlined in the Academic Suspension appeal process above. Students are ultimately responsible for their enrollment and need to check their enrollment schedule for accuracy.

Suspension Reinstatement

Students wishing to appeal their suspension need to fill out the suspension appeal form that is emailed to them or accessed at the link above and schedule an appointment with an Advisor to appeal. The Advisor will consider the student's appeal and make a final determination. If approved, students will be eligible to register, but in a probationary status.

Academic Renewal

All course work taken at RRCC is reflected on your permanent transcript. However, you can petition to remove up to 30 credit hours of substandard (D or F) grades earned from your cumulative grade point average (GPA) by submitting a Petition for Academic Renewal. Before submitting the required written request, you must wait a minimum of two academic years from the last term being considered for the petition. You also must have completed a minimum of six credit hours of new course work at RRCC, after the substandard course work, with a GPA of 2.0 or higher for the new courses. Only courses that were taken a minimum of two years before the petition is submitted can be included in the petition.

You may petition only once to remove grades and credits from your cumulative GPA. Once Student Records has removed these grades and credits from your cumulative GPA, they cannot be reinstated or used for any degree or certificate. The grades and credits will still appear on your permanent academic transcript. Credit hours earned for courses eliminated from your GPA for Academic Renewal will remain deducted from your remaining COF stipend eligible hours.

Attendance

To benefit the most from your instruction, attend each class, come to class prepared, arrive on time, submit assignments when due, and take exams when scheduled. In addition, comply with attendance policies set by individual instructors.

If you do not establish attendance in a course before the drop date you will be reported as a "No Show" by the instructor and dropped from the course. For an online course, you must log in and actively participate before the drop date or you will be reported as a "No Show" by the instructor and dropped from the course.

Course Load

For most students, a typical academic course requires two to three hours of outside preparation for each hour spent in class. For example, a 15-credit load represents a commitment of 45-60 hours per week, consisting of 15 hours in class and 30-45 hours of outside preparation.

The average full-time course load is 15 credits for each fall and spring semester. During the summer semester, the average full-time course load is 12 credits. If you register for fewer than 12 credits, you are classified as part-time. You will need your advisor to provide an override in order to enroll for more than 18 credits during any semester. You may schedule an appointment via Navigate to talk with an advisor to get an override or email advising@rrcc.edu.

Grades

Final course grades are assigned five (5) calendar days after a course ends. If you need an earlier grade report, contact the instructor.

Grading Symbols

A: Distinguished achievement for superior work.

B: Better than acceptable achievement.

C: Acceptable achievement for advancement in the same or related studies.

D: Less than acceptable achievement for advancement in the same or related studies (credit may not transfer or count toward some degrees or certificates).

F: Fail. Equivalent to a grade of **D** or **E** and is available only for certain pre-designated courses. "F" grades will count in attempted and earned credits and will be included in GPA calculations. A request for the P/F option must be submitted to the Student Records office prior to the course census date. The P/F option may not be appropriate for all courses.

AU: Audit. If you want to take a course without earning credit, you can register to audit that course. You must pay full tuition and fees, and you will not receive the COF stipend for the course. You must declare your intention to audit no later than the course's tuition refund date. Once you have registered to audit a course, you cannot change your registration from auditing to earning credit for the course. The college will not award credit for any audited course.

W: Withdrawal. Student was withdrawn at their request after drop deadline, but prior to withdrawal deadline.

WX: Student was administratively withdrawn through appeal, no fault, etc.

WD: Student was administratively withdrawn for cause.

I: Incomplete. If you are not able to complete the learning objectives before the end of a course because of verifiable extenuating circumstances, the instructor may request a grade of incomplete at the initiation of the student. Before you are eligible to receive an "I", you must have completed a minimum of 75% of the course work with a grade of **C** (or higher). Before the end of the course, you are responsible for making arrangements with the instructor to complete an Incomplete Grade Contract. If you do not complete the course work by the agreed-upon deadline, the instructor will change the "I" grade to the letter grade stipulated in the contract. If no grade change is issued, the "I" will be changed to the letter grade indicated on the incomplete contract.

P: Pass. Equivalent to a grade of **C** or higher and is available only for certain pre-designated courses. "P" grades will count in attempted and earned credits but will not be included in GPA calculations.

F: Fail. Equivalent to a grade of **D** or **E** and is available only for certain pre-designated courses. "F" grades will count in attempted and earned credits and will be included in GPA calculations.

P/A, P/B, P/C: These are satisfactory grades awarded only for developmental courses. The **A**, **B**, and **C** indicate the level of satisfactory performance. These grades are not included in the GPA calculation. The course will not count for attempted and earned credits.

F/D, F/F: These are unsatisfactory grades awarded only for developmental courses. The **D** and **F** indicate the level of unsatisfactory performance. These grades are not included in the GPA calculation. The course will not count in attempted credits and will not carry earned credits.

I/F: Incomplete for developmental courses.

SP: Satisfactory Progress. Under the college's continuous enrollment policy, certain courses have been designated open entry. You are eligible to receive an "SP" only if you are enrolled in an open-entry course. By the end of the semester, you must have completed course work (prorated by your registration date) with a grade of **C** (or higher) before you can be eligible for an "SP". Also, you can request an "SP" based on verifiable extenuating circumstances. Before the end of the semester, you are responsible for making arrangements with the instructor to sign an "SP" Grade Contract. If you do not complete the course work by the agreed-upon deadline, the instructor will change the "SP" to the letter grade stipulated in the contract. If no grade change is issued, the "SP" will be changed to an **F** at the end of the next full 15-week semester.

Z: Placeholder. Grade not yet reported. If no grade is issued, this placeholder will be changed to an **F** grade at the end of the next full semester.

Grade Point Average (GPA)

Calculation

When computing your cumulative grade point average (GPA), various numerical values are assigned and used. Those that appear on your transcript are:

Attempted Credit Hours (AHRS)

Once you register for a course, you are attempting the credit hours assigned to that course. Attempted hours are not used to calculate your GPA.

Earned Credit Hours (EHR)

If you earn a final course grade of A, B, C, D, or S, you will receive earned credit hours for that course. Earned hours are not used to calculate your GPA.

Quality Credit Hours (QHRS)

If you earn a final course grade of A, B, C, D, or F, you will receive quality credit hours for that course. Quality hours are used to calculate your GPA.

Quality Points (QPTS)

The main grading symbols are given points: A=4, B=3, C=2, D=1, and F=0. The points assigned to the letter grade multiplied by the quality credit hours received for the course give a numerical value called quality points. These points are used to compute your cumulative GPA.

Grade Point Average (GPA)

Your grade point average is the numerical value found by dividing the total number of quality points (QPTS) by the total number of quality credit hours (QHRS).

The GPA's highest possible numerical value is 4.0.

Calculating your GPA

Your grade point average is the numerical value found by dividing the total number of quality points (QPTS) by the total number of quality credit hours (QHRS).

Prefix	Grade	AHRS	EHR	QHRS	QPTS		
ENG1340	B	3	3	3	3X3	=	9
HIS1310	W	3	0	0	0X0	=	0
MAT2410	A	5	5	5	4X5	=	20
PSY 1001	C	3	3	3	2X3	=	6
SOC 1001	F	1	0	1	0X1	=	0
Totals		15	11	12			35

GPA=Total QPTS (35) Divided by Total QHRS (12) Equals 2.917 GPA

Graduation

Catalog Graduation Requirements

You will graduate under the catalog requirements in effect for the semester that you were first enrolled unless you have a one-year break in attendance (excluding summer term). If you interrupt attendance, you must meet the requirements of the catalog in effect at the time you re-enrolled. You can also choose to use the catalog that is in effect the semester you graduate. Be sure to keep a copy of your catalog.

You will not receive a diploma until you have met all financial obligations to any college that is part of the Colorado Community College System (CCCS).

Graduation Requirements

1. You must obtain a minimum cumulative grade point average of 2.0 (C average). Some programs will require at least a B or C in specific courses.
2. The college reserves the right to substitute or delete courses in degree or certificate programs.
3. Not all programs or courses are available each semester.
4. Courses numbered below 1000 will not count toward any degree or certificate.
5. You must submit a graduation application for your degree or certificate before the graduation application deadline for the term in which you intend to graduate. The application is available on the RRCC website. The deadline is published in the academic calendar for that semester.

Petitioning for Waivers/Program Substitutions

If you wish to petition for a waiver and/or substitution of program requirements, the department lead/faculty advisor must complete a Waiver/Program Substitution Request form. They will complete the request, have it approved by the appropriate instructional dean, and submit it to Student Records where it will be kept on file.

Phi Theta Kappa

RRCC sponsors a chapter of Phi Theta Kappa, the International Honor Society for two-year colleges. Members plan programs and events that encourage scholarship, service, and leadership. To be eligible for membership, you must be a degree-seeking student enrolled in college-level classes, have completed at least 12 credits of study (1000 level or higher) at RRCC, and have a minimum cumulative GPA of 3.5. Membership opportunities occur twice a year, once in the fall and once in the spring semesters.

Recognition of Achievement

Honors Scholar

Honors Scholars are those students who have completed the Dr. John U. Trefny Honors Program curriculum and requirements at RRCC. The Honors Scholar designation will appear on your official academic transcript and will be noted in the annual Commencement Program. All completed honors courses are also recorded on your official academic transcript.

To receive this academic honor, you:

- Must be admitted to the Dr. John U. Trefny Honors Program.
- Must complete the minimum 18 credit hours in honors designated RRCC courses.
- Must maintain a 3.5 GPA throughout the two-year program.
- Must complete the required service-learning hours.
- Must complete the Honors Capstone project.
- Must have completed the requirements for an Associate of Arts, Associate of Science, Associate of General Studies, or Associate of Applied Science degree; or have completed a certificate program containing at least 30 credits

Dr. John U. Trefny Honors Program

The Honors Program at RRCC provides exceptional learning opportunities through interdisciplinary education and problem-solving experiences for a community of scholars in order to prepare them to be leaders in a global community. The Honors Program is designed to develop STEM leaders while valuing and fostering inclusiveness and intellectual growth.

Information: honors@rrcc.edu

Repeating Courses

You may retake any course taken at RRCC. Only repeat courses registered at RRCC will be eligible to apply to the Repeat Course process. Each registration for the course and each grade received will be listed on the transcript. The highest graded course will be used to calculate the GPA, total credit hours earned, graduation, and graduation honors. Excluded course(s) will not be eligible for calculation into the GPA, total credit hours earned, graduation, or graduation honors.

In the event that the same grade is earned two or more times for a repeated course, the most recent instance of the duplicate grade will be included in the term and cumulative GPA. All other duplicate grades will be excluded from the term and cumulative GPA. All credits removed will still remain deducted from the COF stipend eligible hours and will remain added to your "Attempted Hours" total.

Repeating courses can impact your financial aid Satisfactory Academic Progress status, and also can affect the amount of aid you may receive. Please contact Financial Aid for more information.

Each College 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.

Information: 303-914-6267 or student.records@rrcc.edu

Veterans Progress

Veterans are certified only for courses that apply to their degree programs. If you are eligible to receive Veterans Administration (VA) benefits, you are required to maintain a cumulative 2.0 grade point average (GPA) for all course work attempted. If your cumulative GPA falls below 2.0, you will be placed on academic probation for the following term. If you do not improve your cumulative GPA to at least a 2.0 for the subsequent semester, your VA certification will be suspended until progress is made toward your GPA. You may be reinstated after meeting with the VA school-certifying official at RRCC.

Because credit is not given for audited courses, they are not eligible for certification. If you stop attending, but do not officially drop or withdraw from the course, you are considered "non-attending." You may be dropped administratively, and your benefit certification adjusted accordingly. These actions can result in you owing money to the federal government. Copies of the veteran regulations are available for review in the Veteran Services office on campus.

Prior Credit Review Policy

The evaluation of previous postsecondary 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 credits, reduce the program length proportionately, notify the student and Veterans Affairs in writing of this decision, and adjust invoicing of the VA accordingly.

Title 38 US Code Section 3679(e)

RRCC permits any covered individual to attend or participate in the course of education during the period beginning on the date on which the individual provides a certificate of eligibility or statement of benefits for entitlement to educational assistance under chapter 31 or 33 and ending on the earlier of the following dates:

1. The date on which payment from the VA is made.
2. 90 days after the state certification of tuition and fees following the receipt of the certificate of eligibility.

RRCC will not impose any penalty, to include the assessment of late fees, the denial of access to classes, libraries or other institutional facilities, or requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet their financial obligations to the institution due to the delayed disbursement of funding from VA under chapter 31 or 33.

Information: www.va.gov

Class Scheduling Options

Accelerated Courses

An accelerated course takes the content from a traditional 15-week, 3- or 4-credit class and compresses it into a shorter time frame. Accelerated classes are 3 or more credits and meet for less than the traditional 15-week semester. Classroom and online classes are available.

Accelerated classes are designed to meet the needs of busy professionals and students with active lifestyles. Characteristics of successful students include:

- Excellent time management skills
- Self-motivation
- Ability to learn on their own
- Commitment to their education

Hybrid Courses

Hybrid courses at RRCC are courses that combine on-campus classroom instruction with online learning components and/or out-of-class activities. Hybrid learning is for students who wish to combine the flexibility of face-to-face instruction with activities such as online collaborative discussions, group projects, and/or other out-of-class assignments. In a Hybrid course, traditional face-to-face instruction will be reduced but not entirely eliminated. Internet access is required for the online course activities.

Hybrid Traditional Courses

A class that has both in-person and remote learning elements, with the frequency of in-person learning based on instructional needs. Traditional hybrid courses will require students to be on campus and face-to-face for a portion of their coursework and engage with the remainder remotely asynchronously (the other days of the week will not be published in the schedule of classes).

Hyflex Courses

A class that is taught as in person and online simultaneously and is considered multi-modal, such that each student can either choose their mode of engagement in the course for the day or will be assigned a mode of engagement for that day by their instructor. That is, in some cases, students can choose to attend face-to-face meetings or participate fully online, and they may be able to choose to go back-and-forth between these different modes of participation throughout the duration of the course. In other cases, students will be assigned a day to participate in person. Classes are conducted with high interactivity for both in-person and remote students simultaneously, where cameras and microphones are set up in the classroom to promote seamless interaction.

Online Courses

RRCC Online Courses

Courses through RRCC Online are taken anytime, anywhere at your convenience. Most courses follow a traditional semester schedule, and many also have accelerated seven-week online sections. They offer regular communication with faculty and fellow students who may be anywhere in the world. At the same time, you learn to use the Internet, chat rooms, and threaded discussions to enhance your learning experience.

You can register, pay, order books, attend class, and use library services online. If you do not have access to a computer, you may visit the Learning Commons on the Lakewood or Arvada campus to use computers.

Information: www.rrcc.edu/online-learning.

CCCOOnline Courses

Colorado Community College Online provides a centralized online program where you can take classes, earn a certificate, or even complete an associate degree from the community college of your choice. Meet with an RRCC advisor for details.

All courses taken through CCCOnline are associated with the Colorado community college of your choice within the state system. Choose RRCC as your home college, and your transcript will show your CCCOnline courses as RRCC courses.

Information: 888-800-9198 or www.cconline.org.

Remote Courses

A class that has remote both online and remote learning elements. The course will meet online synchronously (the day(s) of the week will be published in the schedule of classes). Instructors and students log-in on specific days and times for class. Remote classes should meet during the scheduled times. There is no on-campus presence. Accurately scheduling courses and seat time equivalencies is required for accreditation.

Self-Paced Courses

Working with an instructor, students will design their own schedules. Self-paced courses provide flexibility and the opportunity to study when students have the most time. Most instructors will meet with their students at the beginning of the semester, and then students will send assignments back and forth via traditional mail, drop-in, or email.

Students who are successful in self-paced courses:

- Are self-starters
- Work independently
- Regularly meet deadlines
- Have strong reading and writing skills
- Are not looking for a social learning setting
- Are highly motivated

Traditional Courses

Classes give the student a chance to participate in lectures and discussions. It provides the student an opportunity to develop relationships with fellow students and instructors.

View our catalog and search for classes at www.rrcc.edu/schedule-catalog.

Weekend Courses

If you work, have a family, or want something interesting to do on Friday nights, Saturdays, and/or Sundays, Weekend classes are for you. You can work on a college degree, take classes for fun, or brush up on skills you need for your job. Many weekend classes can be completed in as little time as a day.

CCCS Instructional Method Changes

CCCS Instructional Method Changes

Background

The majority of CCCS's instructional methods were established in 2005 and 2006 and have remained relatively unchanged. Due to changes in technology and best practices, these methods have been re-evaluated to eliminate antiquated instructional methods, establish new future forward methods, and classify primary and secondary methods; all based on the students' experience.

Note: All courses, regardless of instructional method, may have work required to be done outside of class meetings that may include discussions or assignments that use the Learning Management System.

New Instructional Methods

RM - Remote Real-Time

EAB Display: Live: Remote Only.

Student Experience: Class will be taught in real-time, with 100% remote delivery at pre-determined times. There is no scheduled in person attendance. Class will be 100% real-time live meetings delivered remotely via technology.

RH - Remote Hybrid

EAB Display: Live: Remote/Online Hybrid.

Student Experience: Class will have some live real-time remotely delivered meetings at pre-determined times and some on-line components. Percentage of on-line versus remote-real time can vary by class. There is no scheduled in person attendance.

HF - HyFlex

EAB Display: Live: Remote or In-person.

Student Experience: A highly flexible experience where the course is delivered entirely remotely in real-time, entirely in person in real-time, or a combination of the two.

HL - HyFlex with Lab

EAB Display: Live: Remote or In-person With In-person Lab.

Student Experience: A highly flexible experience where the course is delivered entirely remotely in real-time, entirely in-person in real-time, or a combination of the two.

Lab will require in-person attendance.

CL - Classroom Based

EAB Display: On Campus: In-person.

Student Experience: Class meetings are on-site and in-person.

Note: Replaces Traditional.

CB - Competency Based

EAB Display: Competency Based.

Student Experience: Student's will have a fixed amount of time to meet specific competencies before receiving credit for the class.

Note: This mode replaces Self-paced.

Retained Instructional Methods

HY - Hybrid

EAB Display: Hybrid.

Student Experience: Class will have some live in-person components, and some on-line components. Percentage of on-line versus in-person can vary by class.

ON - Online

EAB Display: Online.

Student Experience: Class is entirely online with no real-time expectations.

CE - Continuing Education

EAB Display: Not Displayed.

Student Experience: Code is reserved for non-credit courses, students take these courses through their college continuing education, community education, and/or work force development office and do not receive academic credit.

WC - WebCast

EAB Display: Global Delivery.

Student Experience: On-site student meetings with on-site or remote instruction by use of technology.

Deprecated Instructional Methods

IV - Interactive Video.

TE - Technology Enhanced.

TR - Traditional.

TV - Telecourse.

SP - Self Paced.

CT - Career-Technical Course.

Primary Instructional Methods

The below instructional methods will be considered primary modes of instruction for the majority of courses:

Hybrid

Students Pay On-Campus Rates

Class will have some live in-person components, and some online components. The percentage of online versus in-person can vary by class. We will offer two types of hybrid courses:

1. Hybrid In-person and Remote where class will have both scheduled in-person components and scheduled remote components. (Synchronous)
2. Hybrid In-person and Online where class will have both scheduled in-person components and some online components. (Synchronous & Asynchronous)

Online

Students Pay Online Course Fees | Asynchronous

Class is entirely online with no real-time expectations.

Remote Real Time

Students Pay On-Campus Rates | Synchronous

Class will be taught in real-time, with 100% remote delivery at predetermined times. There is no scheduled in-person attendance. Class will be 100% real-time live meetings delivered remotely via technology.

HyFlex

Students Pay On-Campus Rates | Synchronous & Asynchronous

A highly flexible experience where the course is delivered entirely remotely in real-time, entirely in-person in real-time, or a combination of the two. *Students can either choose their mode of engagement in the class for the day or will be assigned a mode of engagement for that day by the instructor. Labs will require in-person attendance.

Classroom Based

Students Pay On-Campus Rates | Synchronous

Class meetings are on-site and in-person.

Secondary Instructional Methods

The below instructional methods will be considered secondary modes of instruction used only for specific circumstances.

Continuing Ed

WebCast

Competency Based

Student Rights and Responsibilities

As a student, you have specific rights that ensure you are treated equitably and that your privacy is protected.

Affirmative Action/Equal Opportunity

Red Rocks Community College is committed to diversity in its people and programs. The College is an equal opportunity educational institution and does not discriminate on the basis of disability, race, creed, color, gender, sexual orientation, gender expression, religion, age, national origin, or ancestry, or any other category protected by applicable law. The College has designated the Executive Director of Human Resources as its Equal Opportunity Employment Officer and Title IX Administrator, with the responsibility to coordinate its civil rights compliance activities and grievance procedures. Report all concerns or complaints relating to discrimination or harassment to Patty Davies, the Executive Director of Human Resources, Title IX Coordinator, Title VII/Equal Opportunity Coordinator, ADA/Sec 504 Coordinator, via mail at: 13300 West Sixth Avenue, Lakewood, CO 80228. Phone 303-914-6298, or email patty.davies@rrcc.edu.

The State Board for Community Colleges and Occupational Education has approved the RRCC Affirmative Action/Equal Opportunity Program Plan (available for individual, public, and agency review in the Office of Human Resources). The college has designated the Executive Director of Human Resources as its affirmative action officer.

For information contact:

Office of Human Resources
Red Rocks Community College
13300 W. Sixth Avenue, Box 17
Lakewood, CO 80228-1255
303-914-6570

Other inquiries may be made to:

Vice President for Legal Affairs
Colorado Community College System
9101 E. Lowry Boulevard
Denver, CO 80230-6011
720-858-2868

Office for Civil Rights,
Denver Office
U.S. Department of Education
Cesar E. Chavez Memorial Building
1244 Speer Boulevard, Suite 310
Denver, CO 80204-3582
303-844-5695 or OCR.Denver@ed.gov
FAX: 303-844-4303

Drug and Alcohol Abuse Information

The Law

RRCC is a state-system community college governed by the State Board for Community Colleges and Occupational Education. Board policy requires RRCC to comply with the Drug Free Schools and Communities Amendments of 1989 (PL 101 226 in Federal law). A copy of this law is on file in the Human Resources Office for your reference. The Drug and Alcohol Abuse Prevention Program includes:

Code of Conduct

Neither students nor employees shall engage in the unauthorized or unlawful manufacture, distribution, possession, use, or abuse of alcohol or illicit drugs on college property or as a part of any college activity. This includes the use, distribution, or possession of "medical marijuana," which remains a violation of Federal law. See the Student Code of Conduct in the Student Handbook for more information.
www.rrcc.edu/student-life/handbook.

Legal Sanctions

There are legal sanctions for violations of the Code of Conduct. Any student or employee who is convicted of the unlawful manufacture, distribution, possession, use, or abuse of illicit drugs or alcohol is subject to criminal penalties under local, state, and federal law. These penalties range in severity from a fine of \$100 up to \$8,000,000 and/or life imprisonment. The exact penalty assessed depends upon the nature and severity of the individual offense.

College Penalties

The college will impose penalties against students and employees who violate the Code of Conduct. Violators will be subject to disciplinary action under student and employee disciplinary policies. The sanctions include, but are not limited to, probation, suspension, or expulsion from the college or probation, suspension, or termination of employment, and referral to authorities for prosecution as appropriate.

Illegal Substances

A controlled substances schedule is on file in the Student Life Office and in the Campus Police Department.

Illegally possessing, using, distributing, or manufacturing any narcotic, dangerous drug, or controlled substance as classified by federal, state, and local laws, or appearing on campus while under the influence of any illegally obtained narcotic, dangerous, or controlled substance is a crime and violation of the Student Code of Conduct. Under federal law, marijuana (including "medical marijuana") is a Schedule I substance. Its possession and/or use on any College property is illegal and subject to prosecution and College sanctions. All students must comply with the RRCC Drug Free Schools and Communities Amendment of 1989 (PL101-226).

Health Risks

Many health risks are associated with drug and alcohol abuse. Risks include, but are not limited to, malnutrition, brain damage, heart disease, pancreatitis, cirrhosis of the liver, mental illness, death, low-birth-weight babies, and babies born with drug addictions. Personal relationships, family dynamics, and the ability to work and study are also at risk. Drug and Alcohol Abuse Prevention Program information and counseling services are available through the Behavioral Health Counseling Office located in the Student Health & Counseling Center.

Community Resources

Consult the yellow pages of the local telephone book for a listing of all private and community-based programs. Check listings under "Alcoholism Treatment" and "Drug Abuse Information and Treatment." For 24-hour assistance, call:

- National Alcohol and Substance Abuse Hotline: 1-800-784-6776
- National HOPEline Network: 1-800-273-8255

Firearms on Campus

Firearms of any kind are prohibited on campus, with the exception of those carried by Certified Peace Officers, guards while working, persons who have been issued a valid permit to carry a concealed handgun in accordance with Colorado's Concealed Carry Act, or with prior approval from the Chief of the RRCC Police Department.

Privacy Notification

The Colorado Community College System considers the following to be directory information. Directory information is limited to the current academic year only. RRCC 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)

Participation in officially recognized activities and sports

and if participating in an officially recognized sport, height and weight

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. Directory information restrictions will remain in effect until you cancel the restriction. A release form is available in Admissions or Student Records or on the Student Records web page under FERPA. Student.Records@rrcc.edu.

Notification of Rights Under the Family Educational Rights and Privacy Act (FERPA) for Postsecondary Institutions

FERPA affords you certain rights with respect to your education records. FERPA rights are afforded to the students at the time of admission.

Your rights include:

1. The right to inspect and review your education records within 45 days of the day RRCC receives a request for access. Submit written requests that identify the record(s) you wish to inspect to the Registrar. The Registrar will make arrangements for access and notify you of the time and place where the records may be inspected.
2. The right to request the amendment of education records that you believe are inaccurate or misleading. You may ask RRCC to amend a record that you believe is inaccurate or misleading. Write to the above RRCC official responsible for the record and clearly identify the part of the record you want changed, specifying why it is inaccurate or misleading. If RRCC does not amend the record as you request, RRCC will notify you in writing of the decision and advise you of the 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 you when you are notified of the right to a hearing.
3. The right to provide written consent before RRCC discloses personally identifiable information contained in your education records, except to the extent that FERPA authorizes disclosure without consent. One exception that permits disclosure without consent is disclosure to a college official with legitimate educational interests. A college official is:
 - an employee of the college or the Colorado Community College System in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit, personnel, and health staff);
 - a person or company with whom the College has contracted (such as an attorney, auditor, or collection agent);

- a member of the State Board for Community Colleges and Occupational Education, the Colorado Department of Higher Education, or the National Student Clearinghouse; the College Opportunity Fund; or to the U.S. Military in compliance with the Solomon Amendment.
- an individual serving on a college advisory committee or 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.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility. Upon request, the college also discloses education records without 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 school's rules or policies governing alcohol or substance abuse; and when the information is needed to protect the health or safety of the student or other individuals in an emergency.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by RRCC to comply with the requirements of FERPA. Write to:

Family Policy Compliance Office
U.S. Department of Education
600 Independence Avenue, SW
Washington, DC 20202-4605

Information: Student Records at 303-914-6267

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 PII from your education records, without your consent, 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.

In accordance with the Fair and Accurate Credit Transactions Act (FACTA) of 2003, RRCC 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 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:

www.ftc.gov/os/statutes/fcradoc.pdf

Red Flag Rules:

www.ftc.gov/bcp/edu/microsites/redflagrule/index.shtml

Identity Theft Consumer:

www.consumer.ftc.gov/features/feature-0014-identity-theft

Information: Student Records at 303-914-6267

Smoking on College Grounds

Consistent with State of Colorado statute and Executive Order D 0036 90, **smoking, vaping, and the sale of tobacco products, vaping products, and e-cigarettes are prohibited in all buildings and on all grounds owned or leased by the state** under the control of the executive branch. Please help us protect people and the environment by following this policy on our campuses and grounds (including parking lots).

To reduce exposure to secondhand smoke, the City of Lakewood's ordinance (9.38-030) makes the following areas smoke-free:

- The 25-foot perimeter around public entrances to buildings
- Public transit waiting areas, bus stops, shelters, light rail platforms, etc.
- City-owned playgrounds, skate parks, athletic fields, and festival grounds

For questions, please contact the Vice President of Administrative Services at **303-914-6346**.

Statewide Transfer Policy and Student Bill of Rights

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

- A quality general education experience that develops competencies in reading, writing, mathematics, technology, and critical thinking through integrated arts and science experience.
- Students should be able to complete their Associate of Arts and Associate of Science Degree programs in no more than 60 credit hours or their baccalaureate programs in no more than 120 credit hours unless there are additional degree requirements recognized by the commission.
- A student may sign a two-year or four-year graduation agreement that formalizes a plan for the student to obtain a degree in two or four years, unless there are additional degree requirements recognized by the commission.
- Students have a right to clear and concise information concerning which courses must be completed successfully to complete their degrees.
- Students have a right to know which courses are transferable among the state public two-year and four-year institutions of higher education.
- Students, upon successful completion of core general education courses, should have those courses satisfy the core course requirements of all Colorado public institutions of higher education.
- Students have the right to know if courses from one or more public higher education institutions satisfy the student's graduation requirements.
- Credit for completion of the core requirements and core courses shall not expire for 10 years from the date of initial enrollment and shall be transferable.

Student Handbook

Students may pick up the current edition of the Student Handbook in the Student Project Center. It can also be found online:

www.rrcc.edu/student-life/handbook.

Voter Registration

RRCC fully supports and advocates that students and staff register to vote. Voter Registration forms are available in the Student Records Office, or on the Colorado Secretary of State website www.elections.colorado.gov. You may also print a voter registration form and mail to the Secretary of State office www.sos.state.co.us/pubs/elections/vote/VoterRegFormEnglish.pdf.

Student Affairs & Campus Services

Accessibility Services

Accessibility Services is committed to removing barriers for students with disabilities to create inclusion to all opportunities at RRCC. The college fully supports Section 504 of the Rehabilitation Act of 1973, with amendments of 1974, as well as the Americans with Disabilities Act (ADA), Amendments Act of 2008.

The Accessibility Services staff collaborate with disabled students to determine appropriate accommodations and supports. Sign language interpreting, books in alternate format, testing accommodations, check-in appointments, and assistive technology are some of the accommodations and supports provided.

The office is also a resource for campus visitors with disabilities. RRCC has an ADA Committee that focuses on ensuring the accessibility of the campus, programs and services.

Information: 303-914-6733 or www.rrcc.edu/accessibility-services

Admissions

The Admissions Office at Lakewood and the front desk at the Arvada campus process all applications for admission and are where you can add, drop, and/or withdraw from classes. The Lakewood Admissions office also determines in-state residency and is available to help you through the process of applying for residency.

Information:

Lakewood campus 303-914-6348 or Arvada campus 303-914-6010
www.rrcc.edu/apply-now

Academic Advising

Academic advisors can help you select courses, identify course prerequisites, obtain program information, evaluate assessment results, check graduation requirements, and assist with transfer planning to a four-year college or university. Advisors are available by appointment, which can be scheduled via Navigate, for more detailed academic goal planning, as well as career planning. All students are strongly encouraged to consult with an advisor before determining a degree or certificate program. Only one degree/certificate modification is allowed per semester.

Information: 303-914-6275 or www.rrcc.edu/advising
Arvada campus 303-914-6010.

Assessment Center

The Assessment Center administers a required academic placement test for students who have just applied, please check out the requirements for taking a placement test on our webpage: www.rrcc.edu/assessment/do-i-need-to-test. The state of Colorado requires this test for a number of students. RRCC also has a number of programs that require parts of this test for every applicant.

We also assist students and faculty in evaluating requests for Prior Learning Assessment (PLA) or Portfolio credit. The Assessment Center offers the College Board's College Level Examination Program (CLEP) and the DANES Subject Standardized Test (DSST) for college credit. These tests enable students to schedule an examination to earn academic credit to bypass certain college courses.

For more information about taking these tests, visit our website: www.rrcc.edu/assessment/clep-checklist.

Information: Lakewood campus 303-914-6720 or Arvada campus 303-914-6075. www.rrcc.edu/assessment

Bookstore

The RRCC Bookstore, located at the Lakewood Campus, is your source for all of your educational materials, including those for CCOOnline classes. We offer digital books and rental books, as well as new and used textbooks. Study aids, reference books, and dictionaries are also available. Textbooks can be ordered online. Once you submit your order, you may request delivery to the Arvada campus. Please give us one business day, and call the Arvada campus at 303-914-6010, to ensure your order is available.

The bookstore also carries school supplies, calculators, printers, headphones, electronics, backpacks, greeting cards, hardcover and paperback best-sellers (discounted 20%), imprinted RRCC gift items and clothing, along with snack food and beverages. Barnes & Noble gift cards may be purchased and redeemed. Bookstore services include special orders for books or merchandise not in stock, as well as textbook buyback.

The bookstore performs computerized textbook buyback EVERY DAY. The best time to sell your textbooks is at the end of each semester. We are very competitive; let us give you a buyback price quote! Textbooks may be ordered online by clicking on "Bookstore" from the RRCC website at www.rrcc.edu. Books may be shipped to your home, held for in-store pickup, or delivered to the Arvada campus. We accept all major credit cards, checks (valid driver's license required), PayPal (online orders), and cash. Financial Aid is accepted for payment for textbooks and school supplies.

To use up to \$750 of your expected financial aid refund to buy your books and supplies, fill out a Bookstore Authorization form in the Financial Aid Office. This form only needs to be submitted to Financial Aid once during your entire student career at RRCC, and funds can be available for use at the bookstore up to two weeks before classes begin. Books and class supplies are the only authorized purchases when using financial aid in this manner.

Receipts are ALWAYS required for returns. Please refer to our website and signs in the bookstore for refund policies and time limits.

Like us on Facebook to find out about special events and offers. Bring this article into the bookstore to get 20% off any imprinted gift or clothing item!

Information: Lakewood campus 303-914-6232, Arvada campus 303-914-6022 or sm259@bnccollege.com or rrcc.bnccollege.com
www.facebook.com/redrocksbookstore

Cafeteria/Food Service

The RRCC Café, located on the Lakewood campus, offers a variety of breakfast, lunch, and snack items. A weekly menu is posted on the student portal (The Rock) for the Hot/Cold line and the Grill. The cafeteria is located on The Bridge between the east and west buildings.

Information: 303-914-6374

Campus Police

The safety of students, faculty, and staff is the priority of the RRCC Campus Police Department. We serve both the Lakewood and Arvada campuses, responding to medical emergencies, investigating criminal acts and traffic accidents, enforcing parking and traffic violations, and opening and securing campus buildings. We provide safety escorts when requested, assist with car battery jumpstarts, and deliver emergency messages by dispatching an officer to that specific location. Campus Police is also the location of lost and found and we are located behind the Information Desk in the main lobby of the Lakewood campus.

Emergencies: 911

Non-emergencies: 303-914-6394

Career Services

RRCC is committed to helping students succeed in their pursuit of a quality education, including assistance in developing a clear career plan. The Career Success Center provides individualized career counseling and coaching, employment resources, career assessments, resume and cover letter writing, job search skills, and mock interviewing assistance. Specific services are listed on the Career Services website www.rrcc.edu/career-services. The best course of action is a sound course of action; having an idea of your career direction will help you focus on a sound academic plan!

Information: Lakewood campus 303-914-6916 or Arvada campus 303-914-6016 www.rrcc.edu/career-services

Career Assessments

The Career Success Center offers a variety of Career Assessments to help you identify the best career options that align your personality, aptitudes, and interests. After taking an assessment, students and alumni can meet one-on-one with a Career Advisor for an individualized interpretation of results.

Information: 303-914-6916

Career Development Course

Career Development, PSY 110, is offered fall semester only and covers all areas of the career development process, including formal and informal assessments (personality, interests, skills, values, strengths, and beliefs); personal career exploration; occupational, labor, and job market resources; the changing workplace; goal-setting; decision-making; networking; informational interviewing; résumé writing; and interviewing skills. Upon completion, students will have created their own vision board and career development plan.

Information: 303-914-6016

Center for Multicultural Excellence

One of RRCC's core values is inclusion. The Center for Multicultural Excellence provides an atmosphere where all students, particularly students of color and other historically underserved students, can find support and engage with issues around social justice and equity. We will be offering this space remotely for the duration of Covid-19 closures. See www.rrcc.edu/diversity for more details. www.rrcc.edu/diversity

Child Care

Red Rocks Community College is home to Child Care Innovations, a Child Care Resource and Referral Agency. Parents looking for childcare may visit Room 2666 at the Lakewood campus or call 1-877-338-2273 for free referrals of licensed childcare facilities, assistance in evaluating options, and helpful consumer education information. To conduct a search online, visit www.qualistar.org/home.html.

The Children's Center at the Lakewood campus offers full-service, full-day care for children from 18 months to kindergarten entry. The high-quality program provides secure and nurturing care. The center serves families of students, staff, faculty, and the community. The center does not provide drop-in care.

Information: 303-914-6328

Coffee Shop

The Coffee Shop, located in the Student Center on the Lakewood campus, offers brewed coffee, espresso drinks, smoothies, quick meals, and snacks.

Information: Lakewood campus 303-914-6262, Arvada campus 303-914-6025

College Prep Zone (CPZ)

The College Prep Zone is a free, walk-in tutoring lab, and it is reserved specifically for students in college-prep classes (MAT 0250, MAT 0300, MAT 1140, CCR 0092, and CCR 0094). Students in these classes have open access to tutoring in the College Prep Zone, where they can develop their study skills and receive help with their math homework, essay writing assignments, and reviewing for upcoming math tests. Tutors can also provide students with effective study strategies to help them succeed in their classes. The lab is located in the Learning Commons, across from the Library, and tutoring is available throughout the week. Visit the website below for more information.

Information: 303-914-6701 www.rrcc.edu/college-prep-zone

Communication Lab

Give your best presentation with help from the Comm Lab:

- Work with one of our trained tutors to improve virtual and face-to-face presentations.
- Learn how to manage speech anxiety.
- Improve your next online presentation.
- Assistance with speech outlining and organization and much more!
- We offer in-person and remote tutoring options

The Communication Lab, located upstairs in the Library (Room 2264) is designed to tutor students across the curriculum in all stages of oral presentations. Free tutoring is available to ALL RRCC Students.

Visit our webpage for more information and to learn how to sign up for an appointment: www.rrcc.edu/communication/comm-lab

Emergency Notifications

Emergency Notification Settings for Students and Staff

Students and staff have the option to be included in the Emergency Alert Notification List, for time when emergency conditions or bad weather require either of the RRCC campuses to be closed. The notification settings can be found under the Welcome tab at "The Rock." Please enter the phone number(s) you would like to include in the Emergency Alert Notification List. In the event of a campus closure due to weather or an emergency due to an imminent threat, you will be notified immediately. You may update your phone numbers at any time.

Red Rocks Community College is exempt from the State Inclement Weather Policy and our campuses may remain open while other state government offices close. If either campus is to be closed for an entire day, every effort will be made to reach a decision by 5:30 a.m. If a campus is to close for the evening, every effort will be made to have a decision by 4:00 p.m.

As an expanded way to communicate during emergencies, RRCC provides text messaging notification. Text messaging will only be used to communicate our emergency messages. In order to receive an emergency text message, you must request or opt-in to the program, and you must have elected text messaging as an option from your phone service provider. If you would like to receive text messages from RRCC for emergency messages, check the box. By checking the box, you are agreeing to all charges incurred by your phone service provider.

Entrepreneur Center

Experience innovation and develop your entrepreneurial spirit at Red Rocks Community College! The Entrepreneur Center at RRCC located at the Lakewood Campus, Room 1247 is a business development and project development resource available to students and alumni of the college.

We strive to build skills in the area of entrepreneurship and link students with the community resources that fuel entrepreneurship and business enterprise ownership. The center provides education about entrepreneurship and small business development, and coordinates college initiatives and events in order to cultivate a culture that supports innovation, exploration, and idea development. Whether you have a passion or curiosity, want to operate a business, or spread your wings with innovative ideas, the Red Rocks Entrepreneur Center is your starting point to success.

ESL/World Language Lab

The ESL/World Language Lab offers tutoring in various subjects, including Japanese and English as a Second Language (ESL). Computers bookmarked with useful language sites are also available. The ESL/World Language Lab is located in the Lakewood Learning Commons (Room 2244).

Information: World Language at 303-914-6710 or ESL at 303-914-6416

Employment and Internship Opportunities for Students

Career Connect Job Board

Students and alumni can join our job search platform, Career Connect (<https://www.rrcc.edu/career-connect>) to get exclusive access to job postings. Career Connect also features My Interview Practice, a highly customizable interview preparation platform with a database of over 7,000 real interview questions.

Internship Services

Internships provide students with an opportunity to work in a position that is directly related to their field of study, applying classroom instruction to practical work experience.

Description

- Most RRCC internships are for credit, from 1 to 6 credits, and subject to current tuition rates.
- Students enrolled in an internship work a minimum of 45 hours for every 1 credit earned. Typical internships are for 3 credits (135 work hours).
- For-credit internships yield a letter grade.
- Internships can be paid or unpaid.
- Students in unpaid internships can apply for an Internship Grant.

Qualifications

- All internships are reserved for currently enrolled RRCC students.
- For-credit internships require a fundamental knowledge in a RRCC field of study, usually one or two semesters of successfully completed RRCC course work.
- A cumulative GPA of at least a 2.5 is required.
- An internship site is needed. Students who want assistance in seeking an internship site are encouraged to contact the experiential learning/internship coordinator for an appointment.
- Students will need to meet with the internship coordinator in order to receive the internship paperwork that will need to be completed before registering the internship for credit.

Information: 303-914-6361 www.rrcc.edu/career-services/experiential-learning

Student Employment

Employment on Campus

Part-time employment is available on both the Lakewood and Arvada campuses for eligible students through Work-Study and Student Hourly Programs. For more information, visit Human Resources in Room 1025 on the Lakewood campus.

Information: 303-914-6600 www.rrcc.edu/human-resources/student-employment

Employment Off Campus

A wide range of full-time, part-time, and temporary job listings are available through our online network. While RRCC cannot guarantee employment, we make every effort to maintain contact with businesses and industries to generate employment opportunities. Other resources available to students include on-campus recruiting visits from business and industry; job announcements posted both online and on campus; and assistance with resume preparation, interviewing skills, and general career advising.

Information: 303-914-6906 www.rrcc.edu/career-connect

First Year Experience (FYE)

First Year Experience (FYE) is a set of programs, events, services and staff that support students in their first year of college to help them be more successful both academically and personally during their transition into college. This includes orientation, curricular and co-curricular programming and connections to support services.

You are considered a first-year student through your first full fall, spring and summer semester at Red Rocks Community College.

www.rrcc.edu/first-year-experience

IDEA Lab

Transforming the Educational Environment

The IDEA Lab is a makerspace on the Lakewood campus and is the space where faculty and students explore, innovate and create. Through real-world projects, students develop skills in innovation, teamwork, communication, collaboration, and creativity. Students from all disciplines are welcome to use the IDEA Lab for class projects, club activities, or personal projects. Prototyping equipment includes 3D printers, CNC mill, laser cutter, soldering station, microcontrollers, podcasting, VR and more. Bring your ideas to the IDEA Lab and find a community of makers who support each other to apply engineering, design, technology, media, creativity and innovation to solve real world problems.

The IDEA Lab supports students to:

- Participate in innovation competitions
- Develop skills in making and rapid prototyping
- Develop an entrepreneurial venture

www.rrcc.edu/idea-lab

Inclusion and Diversity

RRCC is committed to providing access and support to students from a variety of backgrounds. Through cultural programs, mentorship opportunities, and student clubs, there is a place for everyone in the RRCC community. We encourage all students, faculty, and staff to take advantage of the opportunities for learning and personal growth provided through the Center for Inclusion & Diversity.

Information: 303-914-6309 or www.rrcc.edu/diversity

Innovation and Engagement

Innovation and Engagement reimagines STEM learning so that Red Rocks Community College students thrive in the 21st century while contributing solutions to global challenges. Collaborations with business, industry, universities and community organizations provide students with real-world learning opportunities.

Programs of Innovation and Engagement include:

- IDEA Lab
- Student Innovation Fellows
- RISE (Red Rocks Innovations in STEM Equity)

Information: 303-914-6175 or www.rrcc.edu/innovation-and-engagement

International Student Services & Programs

The International Student Services Office provides college preparatory English classes for international and resident students for whom English is not a primary language. It also provides academic and cultural advising for a diverse student population, and specific immigration advising for International students.

Information: 303-914-6416 or www.rccc.edu/international

The Learning Collaborative

If you need a refresher course to brush up on your basic math or English skills, this program offers no-cost, semester-long classes to prepare you for success in college classes. These classes are self-paced, allowing you to find and work in the areas where you need help, and are designed to help you succeed at Red Rocks Community College. Classes are available in both online and in-person formats.

Information: www.rccc.edu/the-learning-collaborative or 303-914-6571

Learning Commons

The Learning Commons is a welcoming place that houses Tutoring, The Learning Collaborative, and "TRiO" Student Support Services. You can study on your own or meet with a tutor in various academic subjects. This wonderful space also provides student access to computers, printers, and study rooms. Learning Commons are available at both Arvada and Lakewood campuses.

Information: Lakewood campus 303-914-6705, Arvada campus 303-914-6030 or www.rccc.edu/learning-commons

LGBTQ Center

The Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) Center at RRCC is a space for LGBTQQIA+ community members and allies to come together to share resources, support, and discussion about topics relevant to the community. We will be offering this space remotely for the duration of Covid-19 closures. See www.rccc.edu/diversity for more details.

Library

The RRCC library provides quiet study areas, access to computers, and private study rooms for group or individual study. The library offers physical and electronic resources to support the RRCC curriculum as well as instruction sessions and research consultations to support student learning. Physical collections include reserve textbooks, faculty-curated book selections, educational films, an ESL collection, and popular and scholarly books. Online services include article databases, ebooks, and streaming video, all of which are accessible from on and off campus at any time. The library provides one-on-one research consultations with a librarian and a 24/7 chat reference service. The library's collections and services are designed to support all students, faculty and staff. The goal of the library is to provide access to promote information literacy in support of self-directed learning, academic achievement, and career accomplishment.

Information: 303-914-6740 or library.rccc.edu

Service Learning

Service Learning (SL) is a way for you to become involved in the community and to combine experiential learning with classroom learning.

The Service Learning program at RRCC connects community engagement with academic instruction, focusing on critical, reflective thinking, and personal and civic responsibility. Service learning can add a new dimension to classroom instruction. You have the opportunity to serve your community while applying knowledge gained in the classroom. Community organizations benefit from your involvement while you enhance your own sense of personal outreach in meeting community needs. Students with a final SL class grade of C or higher will receive Service Learning designation on their official transcripts.

Students interested in pursuing Service Learning in any class that is not SL designated can ask their instructor's permission to pursue individual service projects. Students pursuing independent service learning projects are eligible to receive a SL designation on their transcript.

Information: 303-914-6685 www.rccc.edu/hub/servicelearning

Student Center

The Lakewood campus Student Life offers various services and activities for students, including:

- Campus events and entertainment
- Leadership opportunities
- Publications and bulletin boards
- Student clubs and organizations
- Student ID cards
- Movie tickets
- Study groups
- Computers for academic and leisure use
- Locker rentals
- Student Food Bank
- FAX and copy services

Students who are taking courses at the Arvada campus are encouraged to visit the Lakewood campus and take full advantage of the student services and resources available. The Student Center includes pinball, gaming computers, pool tables, foosball, ping pong, vending machines, the coffee shop, the Den, the Student Life Desk, and the Student Project Center.

Information: 303-914-6370

Student Government

The Voice of the Students

RRCC Student Government represents the interests of the student body. Members work with the college's administration to set policy and plan various activities. To join Student Government, you must be enrolled at RRCC, complete the application process, and maintain a 2.5 GPA. Participation provides an opportunity to develop leadership skills that will assist you in your educational and professional endeavors.

Information: 303-914-6248 or www.rccc.edu/student-life/student-government

Student Health and Counseling Center

Providing Medical and Behavioral Health Care for all RRCC Students

All RRCC students are eligible to access the Student Health & Counseling Center. The Student Health & Counseling Center is staffed by certified and licensed medical and behavioral health providers. We provide nearly all the same general medical services as a Family Practice Clinic. Many of the services are covered by student fees. The clinics are located on the Lakewood campus near the Student Life desk, Room 1569 and on the Arvada Campus in Room 9420.

Medical Services Provided:

- Annual physical exams and program physicals for signature
- Multiple sick visits or consultations as needed
- Evaluation and treatment of common illnesses

- STI testing and counseling
- Women's Health: well woman exam, birth control counseling, and pregnancy testing
- In-Office Procedures: stitches, toenail removal, wart removal, etc. (*Associated charge*)
- Preventative Healthcare: diet/exercise counseling and smoking/tobacco cessation
- Vaccinations: seasonal flu shots, Hepatitis B, MMR, Tetanus (TDap), and Tb testing. (*Associated charge*)
- Lab work: ordered by the provider if indicated and billed directly to the student
- Imaging: xray, ultrasound, CT scan, etc. (*Completed off campus, ordered by the provider if indicated, billed directly to the student*)
- Prescriptions: written by the discretion of the provider, must be filled at an outside pharmacy

Personal health insurance is not required to be seen at the clinic (no copay) but may be utilized for laboratory testing and imaging studies.

The Medical Clinics are open Monday through Friday 9am to 4pm. Hours are subject to change and will be posted at the clinics. For an appointment at Lakewood call **303-914-6655** or stop by the clinic, Room 1569. For an appointment at Arvada call **303-917-6070** or stop by at Room 9420. Walk-ins are welcome and accommodated on a first-come, first-served basis.

Behavioral Health Services

Brief counseling services are provided at both the Lakewood and Arvada campuses by licensed therapists from the Jefferson Center to help with stress, depression, and other life challenges students may encounter.

Students qualify for up to six sessions per semester at no charge or may be referred to community resources. In order to schedule, call **303-914-6655** or come into the Student Health & Counseling Center, Room 1569 or Arvada Clinic, Room 9420.

Appointments with the therapists will be available Monday-Thursdays 9 a.m. to 4 p.m., and Fridays from 9 a.m. to 11:30 a.m. A therapist will be at the Arvada Student Health & Counseling Center one day each week, to be determined at the beginning of each semester.

Walk-ins are welcome and accommodated on a first-come, first-served basis. Visit www.rrcc.edu/behavioral-health-services for additional information. Veterans may request a visit with a Jefferson Center Veterans Services Clinician who specializes in the needs of those who have served in the military and their families. Please visit www.jcmh.org/services/veterans-services for more information.

Peer Counseling Program

The Peer Counseling Program (PCP) is an additional component of the RRCC Behavioral Health Services (BHS). Selected PCP interns and volunteers, referred to as Peer Coaches, are extensively and thoroughly trained in listening and helping skills, recognizing and describing mental health concerns, and assisting their peers in locating appropriate resources either on campus or in the community.

Peer Coaches are available for drop-in appointments during designated hours (to be determined each semester) in the Healthy Minds Resource Center, Room 1577, located just off the Great Hall and across from the Student Life Services desk. Students may also schedule to meet with a Peer Coach by calling the Peer Counseling Program Office at **303-914-6185** or sending an email to peercounseling@rrcc.edu.

Student Records

The Student Records office provides a variety of services such as processing your student transcripts, evaluating your transcripts from other accredited schools for possible transfer credit, processing your graduation application, providing information regarding commencement, processing demographic information such as name or social security number corrections, providing College Opportunity Fund (COF) information and advising, providing paperwork for Academic Renewal and Petitions for Repeated Courses.

Information: 303-914-6267 or www.rrcc.edu/student-records

You may also email us at student.records@rrcc.edu

Student Recreation Center (SRC)

The 35,000 square foot facility was celebrated its grand opening in the Fall of 2017. This state-of-the-art facility was designed with student input. It includes gymnasium space, weight/cardiovascular area, dance/exercise studios, climbing and bouldering wall, an outdoor fitness deck, student meeting and gathering spaces, the R&R Lounge, and a multipurpose field.

All fee-paying students automatically have access to the facility once the semester begins! Online students may opt-in to pay for an SRC membership. Membership automatically grants students access to SRC programs, equipment rentals, open recreation. The SRC hosts programs such as group fitness classes, outdoor trips, climbing clinics, intramural sports, personal training, and so much more!

Student Recreation also provides the Arvada Fitness Center that features fitness equipment for the Arvada students. The fitness center is located in the 5400 Building. See website for additional details.

Information: www.rrcc.edu/student-recreation-center

"TRiO" Student Support Services

The "TRiO" Student Support Services (SSS) program assists its participants in achieving academic and personal success. Eligible participants can be first generation, demonstrate financial need, and/or have a documented disability.

Services Include:

- Personalized student success planning
- Academic tutoring services
- Financial literacy education
- Financial aid assistance/counseling
- Transfer assistance
- Monthly workshops/information sessions

To Apply

Please visit www.rrcc.edu/trio-sss for access to the application or stop by the Lakewood Campus in the Learning Commons, Room 2272.

Information: 303-914-6764 or www.rrcc.edu/trio-sss

Tutoring

Tutoring for various subjects is free to all RRCC students and can assist students in their learning process and academic success. Tutoring services are available in multiple formats: online, in-person, walk-in, and by appointment. In-person tutoring services are available at both Arvada and Lakewood campuses. See the below website for complete details.

Information: www.rrcc.edu/learning-commons/tutoring or 303-914-6705 for the Lakewood Campus and 303-914-6010 for the Arvada campus.

Veteran Services

Services are available to support military and veteran students as they transition to RRCC. Our certifying official assists students with VA educational benefit funding and reports to Veteran Affairs on behalf of the student. Additionally, the Military and Veteran Student Center is a space dedicated to our veteran students for studying, connection to RRCC and community resources, and building community with others entering civilian life.

Information: www.rrcc.edu/veteran-services

Virtual Student Union (VSU)

The RRCC Virtual Student Union is the resource hub for students on D2L providing the community with need-to-know services, support, events and more in one place! The VSU provides information on weekly student events, programming, virtual engagement opportunities, student resources, and virtual discussions. rrcc.desire2learn.com

Writing Center and Online Writing Center

The mission of the Writing Center is to help students become better writers. Our tutors are available to work with students in any subject area to improve their writing skills, offering them strategies and resources for succeeding on any kind of writing assignment, including essays, research papers, and multimedia assignments. Tutors will help students generate ideas, organize and develop topics, revise and edit with confidence, and observe conventions of formatting and documentation. The Writing Center is located upstairs, in the Library (Room 2257) of the Lakewood Campus, and in the Learning Commons of the Arvada Campus. Online writing services are also available through the Online Writing Center.

Information: 303-914-6714 or www.rrcc.edu/writing-center

Certificates

Certificates can require as few as two courses or 5 credits and also may count toward another certificate, an AAS degree, and may transfer to a four-year degree.

1. You must obtain a cumulative grade point average of 2.0. Most programs may require at least a C in specified courses.
2. You must complete at least 50 percent of your program coursework at Red Rocks Community College to receive a certificate.
3. The college reserves the right to substitute or delete courses in a degree or certificate program.

Accounting

- Accounting Clerk (p. 79)
- Accounting Fundamentals (p. 79)
- Bookkeeping Clerk (p. 79)
- Individual Tax Paraprofessional (p. 80)
- Individual Tax Preparer (p. 79)

Air Conditioning, Heating, and Refrigeration

- Air Conditioning (p. 82)
- Forced-Air Heating (p. 83)
- HVAC Fundamentals (p. 82)
- HVAC Control Technician (p. 83)
- Hydronic Heating (p. 83)
- Refrigeration-AHRR (p. 82)
- Refrigeration Level I (p. 82)
- Refrigeration Level II (p. 82)

Auto Collision Technology

(In cooperation with and taught at Warren Tech)

- Automotive Collision Industry Introduction (p. 84)
- Beginning Auto Collision Non-Structure Repair and Refinish (p. 84)
- Intermediate Auto Collision Non-Structure Repair and Refinish (p. 84)
- Advanced Auto Collision Structure Repair and Refinish (p. 84)
- Industry Prepared Structure, Repair and Refinish (p. 85)

Automotive Customization

(In cooperation with and taught at Warren Tech)

- Advanced Auto Customization and Performance (p. 85)
- Auto Customization and Performance (p. 86)
- Automotive Customizing Industry Introduction (p. 85)
- Introduction to Custom Painting (p. 85)
- Introduction to High Performance Vehicles (p. 85)

Automotive Service Technology

(In cooperation with and taught at Warren Tech)

- Auto Service Technician (p. 86)
- Maintenance Light Repair (p. 86)
- Master Auto Service Technician (p. 87)

Business

- Business Foundations (p. 87)
- International Business (p. 88)
- Leadership (p. 88)
- Management (p. 88)
- Marketing (p. 88)
- Nonprofit Management (p. 88)
- Real Estate (p. 88)
- Small Business/Entrepreneurship (p. 88)
- Workforce Readiness (p. 89)

Carpentry

- Advanced Remodeling (p. 90)
- Residential Remodeling (p. 90)

Computer Information Systems

- Business Web Applications (p. 91)
- Cisco Network Associate (p. 91)
- Cyber Security (p. 91)
- Desktop Support (p. 91)
- Game Development (p. 92)
- Network & Systems (p. 92)
- Web Development: Front-End (p. 92)
- Web Development: Back-End (p. 92)

Computer Science

- Computer Science (p. 95)
- Engineering and Computer Science (p. 95)
- Software Developer (p. 95)

Cosmetology

(In cooperation with and taught at Warren Tech)

- Esthetician (skin) (p. 98)
- Hairstylist (p. 98)
- Nail Technician (p. 98)

Culinary Arts

- Culinary Arts (p. 100)
- Introduction to Culinary Arts (p. 99)

Dance

- Choreography (p. 140)

Dental Assisting

- Dental Assistant (p. 100)

Early Childhood Education

- Early Childhood Assistant Teacher (p. 101)
- Early Childhood Director (p. 102)
- Early Childhood Education (p. 101)
- Early Childhood Teacher (p. 101)
- Infant/Toddler Early Childhood Teacher (p. 101)
- Paraprofessional Educator (p. 102)

Electricity Commercial/Industrial/Residential

- 288 Hour Journeyman License (p. 103)
- Advanced Construction Electrician (p. 104)
- Advanced Instrumentation and Control Systems Technician (p. 104)
- Advanced Maintenance Electrician (p. 104)
- Construction Electrician (p. 104)
- Electrical Codes and Standards (p. 103)
- Electrician Installation (p. 103)
- Electrician Renewal (p. 105)
- Industrial Network Instrumentation (p. 105)
- Introduction to Instrumentation & Control Systems Technician (p. 104)
- Maintenance Electrician (p. 104)
- National Electrical Code (p. 103)
- Post-Degree Specialization for Advanced Construction Electrician (p. 104)
- Post-Degree Specialization for Advanced Maintenance Electrician (p. 105)
- Residential Construction Electrician (p. 103)

Emergency Management and Planning

Emergency Management and Planning (p. 106)

Emergency Medical Services

Emergency Medical Technician (p. 107)
Advanced Emergency Medical Technician (p. 107)
Paramedic (p. 108)

Engineering Graphics Technology

Engineering Graphics Architectural (p. 111)
Engineering Graphics Civil (p. 111)
Engineering Graphics Mechanical (p. 111)
Intro to AutoCAD (p. 111)
Revit (p. 111)
SolidWorks (p. 111)

Fine Woodworking

Advanced Wood Turner (p. 113)
Cabinetmaker (p. 113)
Contemporary Furniture Fundamentals (p. 113)
Craftsman (p. 112)
Fine Furniture Craftsman (p. 113)
Furniture Maker (p. 113)
Lutherie Artisan (p. 114)
Lutherie Fundamentals (p. 114)
Lutherie Technician (p. 114)
Woodturner (p. 113)
Woodworking Artisan (p. 113)
Woodworking Fundamentals (p. 112)

Fire Science Technology

Fire Academy / Fire Fighter I (p. 114)
Fire Fighter II (p. 114)
Fire Instructor (p. 115)
Fire Officer I (p. 115)

Integrated Health Professions

Integrative Health Practitioner (p. 118)
Energy Medicine (p. 117)
Reflexology Professional (p. 118)
Wellness Coaching (p. 118)
Yoga Teacher Training (p. 118)

Journalism

Introduction to New Media (p. 119)
New Media Journalist (p. 119)

Law Enforcement

Law Enforcement Academy (P.O.S.T. Certification) (p. 120)
Law Enforcement Technician (p. 120)

Medical Assisting Professional

Medical Assisting (p. 121)

Medical Office Technology

Medical Billing/Coding (p. **Error! Bookmark not defined.**)
Medical Office (p. **Error! Bookmark not defined.**)

Multimedia Graphic Design

Business for Creatives (p. 122)
Graphic Design & Print Production (p. 122)
Graphic Design - Intro to Web Design (p. 123)
Graphic Design - Advanced Web Design (p. 123)
Introduction to Graphic Design (p. 122)

Music

Music Audio Production (p. 124)

Nurse Aide

Nurse Aide (p. 125)

Nursing Refresher

RN Refresher (p. 125)

Outdoor Recreation Leadership

Facilitation/Education Specialist (p. 127)
Fundamentals of Outdoor Leadership (Warren Tech) (p. 126)
Introduction to Outdoor Education (p. 126)
Outdoor Industry Business/Management (p. 127)
The Outdoor Professional (p. 127)
Wilderness Therapy Specialist (p. 127)

Park Ranger Technology

Introduction to Park Ranger Technology (p. 129)
Natural Park Ranger Specialist (p. 129)
Natural Resource Interpretation (p. 129)

Phlebotomy

Phlebotomy (p. 131)

Photography/Videography

Assistant Camera and Camera Operator (p. 131)
Business for Creatives (p. 122)
Business of Photography (p. 131)
Grip (p. 131)
Introduction to Photography (p. 131)
Introduction to Videography (p. 131)
Professional Photography (p. 132)
Professional Photography and Videography (p. 132)
Sound (p. 132)
Videography (p. 131)
Visual Effects and Editing (p. 132)
Visual Media Production & Talent (p. 132)

Plumbing

Plumbing Service (p. 134)

Power Equipment and Powersports Vehicle Technology

(In cooperation with and taught at Warren Tech)
Power Equipment Maintenance Technician (p. 134)
Powersports Vehicle Maintenance Technician (p. 135)

Precision Machining (Introductory)

(In cooperation with and taught at Warren Tech)
Machine Shop Fundamentals (p. 135)
Metrology/Quality Control (p. 135)

Precision Machining (Advanced)

(In cooperation with and taught at Warren Tech)
5 Axis Milling (p. 136)
CNC Lathe Machine Operator (p. 135)
CNC Mill Operator (p. 136)
Manual Machine Operator (p. 135)
Swiss Screw Machine (p. 136)
Wire EDM Operator (p. 136)

Sonography

Echocardiography (p. 138)

Theatre Arts

Advanced Costuming (p. 140)
Costume Basics (p. 140)
Musical Theatre Performance (p. 141)

Stagehand Applications (p. 140)

Stagehand Basics (p. 140)

Stage Makeup (p. 141)

Writing for Stage and Screen (p. 141)

Water Quality Management Technology

Asset Management Professional (p. 142)

Distribution and Collection Training (p. 142)

Infrastructure Security Professional (p. 142)

Integrated Water Professional (p. 142)

Introduction to Wastewater Treatment (p. 142)

Introduction to Water Treatment (p. 142)

Laboratory Analysis (p. 142)

Mathematics in Water Quality (p. 143)

Water Technology Professional (p. 143)

Welding

(In cooperation with and taught at Warren Tech)

Flux Core Arc Welding (FCAW) (p. 144)

Gas Metal Arc Welding (GMAW) (p. 144)

Gas Tungsten Arc Welding (GTAW) (p. 144)

Ox-Fuel Welding and Cutting (OFW and OFC) (p. 144)

Shield Metal Arc Welding (SMAW) (p. 144)

Associate Degrees and Smart Track Degrees

Associate of Arts (AA)

AA Degrees with Designation (DWD)

The state transfer agreements for the following degrees can be found at the Colorado Department of Higher Education website: <http://highered.colorado.gov/Academics/Transfers/Students.html>.

Anthropology (p. 56)
 Art History (p. 57)
 Business (p. 58)
 Communication (p. 59)
 Criminal Justice (p. 60)
 Early Childhood Teacher Education (p. 61)
 Economics (p. 62)
 Elementary Teacher Education (p. 62)
 English (p. 64)
 French (p. 64)
 Geography (p. 65)
 History (p. 66)
 Journalism (p. 66)
 Philosophy (p. 67)
 Political Science (p. 69)
 Psychology (p. 69)
 Public Health (p. 70)
 Sociology (p. 71)
 Spanish (p. 71)
 Studio Art (p. 66)
 Theatre (p. 73)

The above degrees have state-wide articulation agreements with all public four-year colleges and universities in the state. Those who complete an AA degree and the prescribed curriculum in the articulation agreement and are admitted (with no academic deficiencies that require additional coursework) to a receiving institution participating in this agreement are guaranteed the following:

- Junior standing with no more than 60 remaining credits to meet the graduation requirements for a baccalaureate degree in the degree program covered by this articulation agreement.
- Completion of the receiving institution's lower division general education requirements as defined by the GT Pathways curriculum.
- The same graduation requirements as those who begin and complete this degree program at the receiving institution found on the degree requirement checklists. Upon completion, your transcript will indicate your designated degree.

AA Degrees

The Associate of Arts degree (60 credits) is for those who intend to transfer to a four-year college or university and want an education with a liberal arts emphasis. To earn the Associate of Arts degree, you must complete the state-designated general education requirements for a total of 38-42 credits. Other suggested courses are found in the individual catalog subject areas.

Areas of Study:

Environmental Studies (p. 116)
 Foreign Languages (p. 145)
 Secondary Education (p. 139)
 Social Work (p. 137)
 Victim Assistance (p. 99)

Associate of Science (AS)

AS Degrees with Designation (DWD)

The state transfer agreements for the following degrees can be found at the Colorado Department of Higher Education website: <http://highered.colorado.gov/Academics/Transfers/Students.html>.

Biology (p. 57)
 Chemistry (p. 58)
 Computer Science (p. 60)
 Geology (p. 65)
 Mathematics (p. 67)
 Physics (p. 68)
 Psychology (p. 70)

The above degrees have state-wide articulation agreements with all public four-year colleges and universities in the state. Those who complete an AS degree and the prescribed curriculum in the articulation agreement and are admitted (with no academic deficiencies that require additional coursework) to a receiving institution participating in this agreement are guaranteed the following:

- Junior standing with no more than 60 remaining credits to meet the graduation requirements for a baccalaureate degree in the degree program covered by this articulation agreement.
- Completion of the receiving institution's lower division general education requirements as defined by the GT Pathways curriculum.
- The same graduation requirements as those who begin and complete this degree program at the receiving institution found on the degree requirement checklists. Upon completion, your transcript will indicate your designated degree.

AS Degrees

The Associate of Science degree (60 credits) is for those who intend to transfer to a four-year college or university and want an education with a science-related emphasis. To earn the Associate of Science degree, you must first complete the state-designated general education requirements for a total of 38-42 credits. Other suggested courses are found in the individual catalog subject areas.

Associate of Engineering Degree – Transfer track to Colorado State University (p. 109)

Associate of Engineering Degree – Transfer track to Colorado School of Mines (p. 109)

Areas of Study:

Computer Science (p. 98)
 Environmental Science (p. 116)
 Pre-Engineering (p. 109)

Associate of General Studies (AGS) – Generalist

Career-Oriented

The Associate of General Studies – Generalist degree (60 credits) is for those who want to complete a combination of college-level general education courses and a variety of vocational courses. Courses are considered for transfer on an individual basis by the receiving four-year college or university.

AGS – Generalist Degree Requirements (p. 52)

Associate of Applied Science (AAS)

Career-Oriented

The Associate of Applied Science degree (60-75 credits) is for those who are preparing for entry-level employment in a career-oriented program of study or upgrading in a specific occupation. This degree is not intended for transfer; however, courses are considered for transfer on an individual basis by the receiving four-year college or university.

Accounting

- Accounting Paraprofessional (p. 80)
- Accounting Technician (p. 80)

Air Conditioning, Heating, and Refrigeration

- Air Conditioning, Heating, and Refrigeration-AHR (p. 83)

Applied Technology

- Applied Technology (p. 83)

Auto Collision Repair

(In cooperation with and taught at Warren Tech)

- Auto Collision Technology (p. 85)

Automotive Customization

(In cooperation with and taught at Warren Tech)

- Automotive Customization (p. 86)

Automotive Service Technology

(In cooperation with and taught at Warren Tech)

- Automotive Service Technology (p. 87)

Business

- Business Administration (p. 89)
- Interdisciplinary (p. 89)
- Real Estate (p. 90)

Computer Information Systems

- Cyber Security (p. 92)
- Desktop Support (p. 93)
- Game Development (p. 93)
- Network & Systems (p. 94)
- Web Development (p. 94)

Computer Science

- Software Development (p. 96)
- Secure Software Development (p. 96)

Cosmetology

(In cooperation with and taught at Warren Tech)

- Cosmetology (p. 99)

Culinary Arts

- Culinary Arts (p. 100)

Early Childhood Education

- Early Childhood Education (p. 102)

Electricity Commercial/Industrial/Residential

- Construction Electrician (p. 105)
- Construction Electrician/IBEW/NECA (p. 106)
- Industrial Control & Instrumentation Technology (p. 106)
- Maintenance Electrician (p. 105)
- Power Technology (p. 106)

Emergency Management and Planning

- Emergency Management and Planning AAS Degree (p. 106)

Emergency Medical Services

- Paramedicine (p. 108)

- Emergency Medical Technology (p. 108)

Engineering Graphics Technology

- Engineering Graphics Architectural (p. 111)
- Engineering Graphics Mechanical (p. 111)

Fine Woodworking

- Fine Woodworking (p. 114)

Fire Science Technology

- Fire and Emergency Services (p. 115)
- Fire Service Management (p. 115)

Integrated Health Professions

- Integrative Health Professions (p. 118)

Journalism

- Digital Media/Journalism (p. 119)

Law Enforcement

- Law Enforcement (p. 120)

Medical Assisting Professional

- Medical Assisting (p. 122)

Multimedia Graphic Design

- Graphic Design & Print Production (p. 124)
- Simulation and Game Design (p. 124)

Outdoor Recreation Leadership

- Outdoor Education (p. 128)

Park Ranger Technology

- Park Ranger Technology (p. 129)

Photography/Videography

- Professional Photography (p. 131)
- Videography (p. 132)

Power Equipment and Powersports Vehicle Technology

(In cooperation with and taught at Warren Tech)

- Power Equipment and Powersports Vehicle Technology (p. 135)

Precision Machining Technology

(In cooperation with and taught at Warren Tech)

- Precision Machining (p. 136)

Radiologic Technology

- Radiologic Technology (p. 137)

Sonography

- Diagnostic Medical Sonography (p. 138)

Theatre Arts

- Theatre Technology (p. 141)

Water Quality Management Technology

- Water Quality Management (p. 143)

Welding

(In cooperation with and taught at Warren Tech)

- Welding (p. 144)

Smart Track Degrees

Degree Pathway

With Smart Track, we've prepared a degree pathway for you! These associate degrees offer a two-year sequence of courses that are arranged and waiting for you to register...and they are guaranteed to run.

Once you've enrolled in a Smart Track degree, you'll have your schedule of courses in advance, so you know where you can fit in work and other commitments. Smart Track degrees help you to complete your degree in two years to start your career or transfer. All Smart Track courses are offered Monday through Thursday during the day.

Smart Track Degrees are currently available at our Arvada Campus. Meet with an RRCC advisor for questions or to get started!

Integrated Pathway to a B.S. in Nursing

Website: www.rrcc.edu/integrated-nursing-pathway

Social Work Program

Website: www.rrcc.edu/social-work

AA and AS Smart Track Degrees

Website: www.rrcc.edu/smart-track-degrees

Degree Requirements (AA, AS, AGS and AAS)

AA Degree Requirements

Four-year college transfer guides are available via the CDHE website at: <https://cdhe.colorado.gov/institutional-transfer-guides>

Statewide GT (Guaranteed Transfer) Courses (37-42 credits). Approved electives (18-23 credits). Total Credits (60 required).

(Written) Communication - GT-CO1 & GT-CO2 - 2 courses (6 credits)

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3

CCCS Communications Requirement - 1 course (3 credits)

COM 1150	Public Speaking	3
	or	
COM 1250	Interpersonal Comm: SS3	3
	or	
COM 2300	Intercultural Comm: SS3	3

Note: Communication is a Colorado Community College System requirement and is in addition to the Statewide Guaranteed transfer (GT) courses.

Mathematics - GT-MA1 - 1 course (3-5 credits)

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

Arts and Humanities (6 credits)

Two guaranteed transfer Arts & Humanities courses from two different areas (AH1, AH2, AH3 or AH4).

Arts and Expression - GT-AH1

ART 1110	Art Appreciation: AH1	3
ART 1111	Art Hist Ancient/ Mediev: AH1	3
ART 1112	Art Hist Renaiss/1900: AH1	3
COM 1300	Comm and Popular Culture: AH1	3
DAN 1050	Dance History: AH1	3
DAN 1025	Dance Appreciation: AH1	3
MUS 1020	Music Appreciation: AH1	3
MUS 1021	Music Hist MdvL-Classical: AH1	3
MUS 1022	Music Hist Romantic-Prsnt: AH1	3
MUS 1023	Survey of World Music: AH1	3
MUS 1025	History of Jazz: AH1	3
THE 1005	Theatre Appreciation: AH1	3
THE 1008	Theatre Script Analysis: AH1	3
THE 2011	Development of Theatre Greek-Renaissance: GT-AH1	3
THE 2012	Dev of Theatre Restor-Mod: AH1	3
THE 2015	Playwriting: AH1	3

Literature and Humanities - GT-AH2

HUM 1003	Intro to Film Art: AH2	3
HUM 1015	World Mythology: AH2	3
HUM 1021	Humanities: Early Civ: AH2	3
HUM 1022	Humanities: Mediev-Mod: AH2	3
HUM 1023	Humanities: Modern Wrld: AH2	3
LIT 1015	Intro to Literature I: AH2	3
LIT 2001	World Lit to 1600: AH2	3

LIT 2002	World Lit After 1600: AH2	3
LIT 2005	Race, Ethnicity, Culture: AH2	3
LIT 2011	Amer Lit to Civil War: AH2	3
LIT 2012	Amer Lit Aft Civil War: AH2	3
LIT 2021	British Lit to 1770: GT-AH2	3
LIT 2022	British Lit Since 1770: GT-AH2	3
LIT 2025	Intro to Shakespeare: AH2	3
LIT 2046	Literature of Women: AH2	3
LIT 2068	Celtic Literature: AH2	3

Ways of Thinking - GT-AH3

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

Foreign Languages - GT-AH4

Must be intermediate/200-level.

FRE 2011	French Language III: AH4	3
GER 2011	German Language III : AH4	3
ITA 2011	Italian Language III: GT-AH4	3
JPN 2011	Japanese Language III : AH4	3
RUS 2011	Russian Language III: GT-AH4	3
SPA 2011	Spanish Language III: AH4	3
FRE 2012	French Language IV: AH4	3
GER 2012	German Lang IV: GT-AH4	3
ITA 2012	Italian Language IV: GT-AH4	3
JPN 2012	Japanese Language IV: AH4	3
RUS 2012	Russian Language IV: GT-AH4	3
SPA 2012	Spanish Language IV: AH4	3

History - GT-H1 (3 credits)

One guaranteed transfer History course GT-H1.

HIS 1310	Western Civ:Antiquity-1650: HI1	3
HIS 1320	Western Civ: 1650-Present: HI1	3
HIS 1110	The World: Antiquity-1500: HI1	3
HIS 1120	The World: 1500-Present: HI1	3
HIS 1210	US History to Reconst: HI1	3
HIS 1220	US History since Civil War:HI1	3
HIS 2005	Women in World History: HI1	3
HIS 2125	American Environment Hist: GT-HI1	3
HIS 2115	American Indian History: HI1	3
HIS 2105	Women in U.S. History: HI1	3
HIS 2135	Colorado History: HI1	3
HIS 2130	Hist of American West:HI1	3
HIS 2145	US History Since 1945: HI1	3
HIS 2610	Hist of Modern China: GT-HI1	3
HIS 2200	History of Latin America: HI1	3
HIS 2015	20th Century World History:HI1	3
HIS 2500	History-Islamic Civilization: GT-HI1	3
HIS 2310	Hist Christianity in World: GT-HI1	3
HIS 2120	US Foreign Relations History: GT-HI1	3

Social and Behavioral Sciences (6 credits)

Two guaranteed transfer Social and Behavioral Science courses (GT-SS1, GT-SS2, GTSS3)

OR

One guaranteed transfer Social and Behavioral Science course (GT-SS1, GT-SS2, GT-SS3)

AND One guaranteed transfer History course (GT-HI1)

Economic and Political Systems - GT-SS1

ECO 1001	Econ Of Social Issues:SS1	3
ECO 2001	Prin of Macroeconomics: SS1	3
ECO 2002	Prin of Microeconomics: SS1	3
ECO 2045	Environmental Economics:SS1	3
POS 2020	Intro to Political Science: SS1	3
POS 1011	American Government: SS1	3
POS 1025	Amer State and Local Govt: SS1	3

POS 2005	International Relations: SS1	3
POS 1050	Current Polit Issues: SS1	3
POS 2025	Comparative Government: SS1	3

Geography - GT-SS2

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

Human Behavior, Cultural and Social Frameworks - GT-SS3

AGR 2106	World Population and Food: SS3	3
ANT 1001	Cultural Anthropology: SS3	3
ANT 1003	Intro to Archaeology: SS3	3
ANT 1208	Arch.of World Rock Art: SS3	3
ANT 2115	Native Peoples N. America: SS3	3
ANT 2125	Anth of Religion: SS3	3
ANT 2550	Medical Anthropology:SS3	3
COM 2300	Intercultural Comm: SS3	3
CRJ 1010	Intro to Criminal Justice: SS3	3
JOU 1005	Introduction to Mass Media: SS3	3
PSY 1001	General Psychology I: SS3	3
PSY 1002	General Psychology II : SS3	3
PSY 2105	Psychology of Gender: SS3	3
PSY 2107	Human Sexuality: SS3	3
PSY 2221	Social Psychology: SS3	3
PSY 2222	Psychology of Death/Dying: SS3	3
PSY 2440	Human Growth & Developmnt: SS3	3
PSY 2441	Child Development: SS3	3
PSY 2333	Health Psychology: SS3	3
PSY 2552	Abnormal Psychology: SS3	3
PSY 2771	Psychology of Personality: SS3	3
SOC 1001	Intro to Sociology I : SS3	3
SOC 1002	Intro to Sociology II: SS3	3
SOC 2005	Soc Of Family Dynamics:SS3	3
SOC 2007	Environmental Sociology:SS3	3
SOC 2015	Contemp. Social Problems: SS3	3
SOC 2016	Sociology Of Gender: SS3	3
SOC 2018	Sociology of Diversity: SS3	3
SOC 2020	Sociology of Religion: SS3	3
SOC 2031	Sociology-Deviant Behavior:SS3	3
SOC 2037	Sociology Of Death&Dying: SS3	3

Student Choice (3 credits)

Select one course from any guaranteed transfer course (listed above) from the Arts & Humanities (AH), History, (H1), or Social & Behavioral Sciences (SS) Category.

Natural and Physical Sciences (7-10 credits)

Two guaranteed transfer Natural & Physical Sciences courses including at least one lab course (GT-SC1, GT-SC2).

Courses without Lab - GT-SC2:

AST 1150	Astrobiology: SC2	3
AST 1140	Astronomy Ancient Cultures: SC2	3
AST 1160	Cosmology: SC2	3
BIO 1016	Intro to Human Disease: SC2	3
ENV 1010	Natural Disasters: SC2	3
GEY 1108	Geology of National Parks: SC2	3
SCI 1105	Science in Society: SC2	3

Courses with Lab - GT-SC1:

ANT 1005	Bio Anthropology W/Lab: SC1	4
AST 1110	Planetary Astronomy w/Lab: SC1	4
AST 1120	Stellar Astronomy w/Lab: SC1	4
BIO 1005	Science of Biology w/Lab: SC1	4
BIO 1111	Gen College Biology I/Lab: SC1	5
BIO 1112	Gen College Biology II/Lab:SC1	5
BIO 2101	Human Anatomy & Phys I w/Lab: SC1	4
BIO 2102	Human Anatomy & Phys II w/Lab: SC1	4
BIO 2104	Microbiology w/Lab: SC1	4
BIO 2120	General Zoology w/Lab: SC1	5
BIO 2121	Botany w/Lab: SC1	5
BIO 2124	Genetics: SC1	4
CHE 1011	Intro to Chemistry I/Lab: SC1	5
CHE 1111	Gen College Chem I/Lab: SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5
ENV 1111	Environmental Sci w/Lab: SC1	4
GEO 1011	Phys Geo: Lndfrms w/Lab: SC1	4
GEO 1012	Phys Geo:Clim & Eco w/Lab: SC1	4

GEY 1111	Physical Geology w/Lab: SC1	4
GEY 1112	Historical Geology w/Lab: SC1	4
GEY 1135	Environmental Geol w/Lab: SC1	4
GEY 1155	General Oceanography w/Lab:SC1	4
MET 1050	Gen Meteorology w/Lab: SC1	4
PHY 1105	Conceptual Physics w/Lab: SC1	4
PHY 1107	Energy Sci & Tec w/Lab: SC1	4
PHY 1111	Physics Alg-Based I/Lab: SC1	5
PHY 1112	Physics Alg-Based II/Lab: SC1	5
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
SCI 1055	Integrated Sci I w/Lab: SC1	4
SCI 1056	Integrated Sci II w/Lab: SC1	4

SCI 1055 / SCI 1056 Integrated Science I/II (4/4) (Both must be taken to satisfy science credit. Recommended for Teacher Education only.)

Approved AA Electives (18-23 credits)

These courses transfer to one or more of the public four-year colleges or universities in Colorado. All courses will count toward the AA degree. However, transferability depends on the four-year institution. Additional courses may be transferable. For specific information, please consult an advisor in the Advising Center.

Accounting

ACC 1021	Accounting Principles I and	4
ACC 1022	Accounting Principles II	4

American Sign Language

ASL 1121	American Sign Language I and	5
ASL 1122	American Sign Language II	5

Anthropology

ANT	All courses	
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Art

ART	All courses	
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Astronomy

AST	All courses	
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Biology

BIO	All courses	
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Business

BUS 1015	Introduction to Business	3
BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications	3
BUS 2026	Business Statistics and	3
BUS 2050	Intro to Nonprofit Orgs	3

Chemistry

CHE	All courses	
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Communication

COM	All courses	
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Computer Information Systems

CIS 1018	Intro PC Applications	3
CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CIS 2068	Systems Analysis and Design I	3

Computer Science

CSC 1019	Intro. to Programming (lang)	3
CSC 1060	Computer Science I: (Language)	4
CSC 1061	Computer Sci II: (Language)	4
CSC 1065	Discrete Structures	4
CSC 2025	Computr Arch/Assembly Language	4
CSC 2036	C# Programming	4
CSC 2037	Advanced C# Programming and	4
CSC 2040	Java Programming	3

Criminal Justice				Meteorology			
CRJ 1010	Intro to Criminal Justice: SS3 and above	3		MET 1050	Gen Meteorology w/Lab: SC1	4	
Dance				Music			
DAN	All courses (Some Dance courses may transfer as Physical Education courses.)			MUS	All courses		
Data Science				Outdoor Education			
DAT	All courses			OUT	All courses		
Early Childhood Education				Philosophy			
ECE 1011	Intro to Early Childhood Education	3		PHI	All courses		
ECE 1045	Intro to ECE Techniques	3		Physical Education			
ECE 1031	Guidance Strategies for Young Children	3		PED	All courses		
ECE 2621	Curriculum Methods/Techniques	3		Physics			
ECE 2381	ECE Child Growth & Development and	3		PHY	All courses		
ECE 2101	Working w/Families & Communs	3		Political Science			
Economics				POS	All courses		
ECO	All courses			Psychology			
Education				PSY 1001	General Psychology I: SS3	3	
EDU	All courses above 2000			PSY 1002	General Psychology II : SS3	3	
Engineering				PSY 1010	Career Development	3	
EGG	All courses			PSY 2105	Psychology of Gender: SS3	3	
English				PSY 2107	Human Sexuality: SS3	3	
ENG	All courses above 1022			PSY 2221	Social Psychology: SS3	3	
Environmental Science				PSY 2222	Psychology of Death/Dying: SS3	3	
ENV 1111	Environmental Sci w/Lab: SC1 and	4		PSY 2440	Human Growth & Developmnt: SS3	3	
ENV 1010	Natural Disasters: SC2	3		PSY 2441	Child Development: SS3	3	
Foreign Language				PSY 2333	Health Psychology: SS3	3	
FL	ARA, FRE, GER, ITA, JPN, RUS, SPA- All courses except 1001 and 1002			PSY 2444	Educational Psychology	3	
Geography				PSY 2552	Abnormal Psychology: SS3 and	3	
GEO	All courses			PSY 2771	Psychology of Personality: SS3	3	
Geology				Recreation			
GEY	All courses			REC	All courses (Maximum 3 credits from OUT, PED, and/or REC may apply toward degree.)		
Health and Wellness				Science			
HWE 1050	Human Nutrition	3		SCI 1105	Science in Society: SC2	3	
History				SCI 1055	Integrated Sci I w/Lab: SC1	4	
HIS	All courses			SCI 1056	Integrated Sci II w/Lab: SC1	4	
Honors				Social Work			
HNR	All courses			SWK 1000	Introduction to Social Work	3	
Humanities				SWK 1200	Intervention Techniques	3	
HUM	All courses			Sociology			
Journalism				SOC	All courses		
JOU 1005	Introduction to Mass Media: SS3	3		Theatre			
Literature				THE	All courses		
LIT	All courses			Women and Gender Studies			
Management				WST 2000	Intro Women's Studies: SS3	3	
MAN 2026	Principles of Management	3		WST 2100	Women and Social Action: GT-SS3	3	
Marketing				WST 2200	Goddess/Women Anct Wrld: SS3	3	
MAR 2016	Principles of Marketing	3		WST 2300	Women's Sexuality: SS3	3	
Mathematics				WST 2075	Special Topics	0-12	
MAT 1240	Math for Liberal Arts: MA1 and above	4		WST 2078	Women's Studies Seminar	0-12	
				Additional AA Degree Requirements			
				The State-Guaranteed Colorado Community College General Education requirements and the Approved Elective Transferable courses have been incorporated into this AA degree. Completion of the degree with a C or higher in every course guarantees that you can transfer, upon admission, to any Colorado public four-year college or university with the appropriate 60 transferable credits. Grades C or higher are required for all coursework. In addition, a minimum 2.0 grade point average is required for degree completion. This is an open-ended degree plan, allowing you to tailor your coursework toward a particular transfer institution and/or major. Please refer to other degree offerings for specific articulations and designations.			

When choosing general education requirements and electives, it is important to contact an advisor and the college or university where you intend to transfer. You will graduate under the catalog requirements listed for the semester in which you were first enrolled. If you interrupt attendance for two consecutive semesters (excluding summer term) or more, and then return, the catalog pertaining to the semester of re-admission is the governing document. You may also choose to use the catalog that is in effect the semester you graduate. Be sure to obtain and keep a copy of the catalog governing your degree.

Other AA Degree Requirements

1. A minimum of 60 credits is required for the Associate of Arts Degree. This must include 37-42 credits in general education transfer courses, which includes COM 1150, COM 1250, or COM 2300 (3 credits), and 18-23 credits in the areas specified above in approved electives.
2. You must complete 18-23 semester elective credits. These must be transferable courses and may include no more than 3 credits in Outdoor Education (OUT), Physical Education (PED), and/or Recreation (REC). Please see an advisor in your area of emphasis for specific course suggestions.
3. If you are planning to transfer to a four-year college or university, you should consult an advisor for assistance in planning your program of study. Also consult the Transfer Guide for GPA requirements of the college to which you are planning to transfer.
4. You must complete a minimum of 15 credits through Red Rocks Community College. These credits must apply toward degree requirements.
5. You must submit a graduation application for your degree or certificate before the graduation application deadline for the term in which you intend to graduate. The application is available on the RRCC website. The deadline is published in the academic calendar for that semester.
6. No more than 6 credits of independent study course work may be applied toward this degree.
7. There is no limit on special-topic courses allowed to count toward an AA degree. In individual cases, the limit will be determined by the program area. If you are taking special-topic courses, you should consult with your advisor regarding how these credits will apply toward a degree.
8. To earn multiple RRCC degrees, you must complete an additional 15 credits of coursework (above and beyond the original 60 credits required for the first degree) for each successive degree. These 15 credits must all apply toward the additional degree and must be completed through RRCC.
9. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

TOTAL CREDIT HOURS: 60

AS Degree Requirements

Four-year college transfer guides are available via the CCHE website at: <https://cdhe.colorado.gov/institutional-transfer-guides>

Statewide GT (Guaranteed Transfer) Courses (39-44 credits). Approved Electives (16-21 credits). Total Credits (60 required).

(Written) Communication - GT-CO1 & GT-CO2 - 2 courses (6 credits)

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3

CCCS Communications Requirement - 1 course (3 credits)

COM 1150	Public Speaking	3
	or	
COM 1250	Interpersonal Comm: SS3	3
	or	
COM 2300	Intercultural Comm: SS3	3

Note: Communication is a Colorado Community College System requirement and is in addition to the Statewide Guaranteed transfer (GT) courses.

Mathematics - GT-MA1 - 1 course (3-5 credits)

MAT 1340	College Algebra: MA1	4
MAT 1420	College Trigonometry: MA1	3
MAT 1440	Pre-Calculus: MA1	5
MAT 2410	Calculus I: GT-MA1	5
MAT 2420	Calculus II: GT-MA1	5
MAT 2431	Calculus III/Engineer App: GT-MA1	5
MAT 2561	Differential Equations with Engineering Applications: GT-MA1	4

Arts and Humanities (6 credits)

Two guaranteed transfer Arts & Humanities courses from two different areas (AH1, AH 2, AH3 or AH4.)

Arts and Expression - GT-AH1

ART 1110	Art Appreciation: AH1	3
ART 1111	Art Hist Ancient/ Mediev: AH1	3
ART 1112	Art Hist Renaiss/1900: AH1	3
COM 1300	Comm and Popular Culture: AH1	3
DAN 1050	Dance History: AH1	3
DAN 1025	Dance Appreciation: AH1	3
MUS 1020	Music Appreciation: AH1	3
MUS 1021	Music Hist MdvI-Classical: AH1	3
MUS 1022	Music Hist Romantic-Prsnt: AH1	3
MUS 1023	Survey of World Music: AH1	3
MUS 1025	History of Jazz: AH1	3
THE 1005	Theatre Appreciation: AH1	3
THE 1008	Theatre Script Analysis: AH1	3
THE 2011	Development of Theatre Greek-Renaissance: GT-AH1	3
	Dev of Theatre Restor-Mod: AH1	3
THE 2012	Playwriting: AH1	3
THE 2015		3

Literature and Humanities - GT-AH2

HUM 1003	Intro to Film Art: AH2	3
HUM 1015	World Mythology: AH2	3
HUM 1021	Humanities: Early Civ: AH2	3
HUM 1022	Humanities: Mediev-Mod: AH2	3
HUM 1023	Humanities: Modern Wrld: AH2	3
LIT 1015	Intro to Literature I: AH2	3
LIT 2001	World Lit to 1600: AH2	3
LIT 2002	World Lit After 1600: AH2	3
LIT 2005	Race, Ethnicity, Culture: AH2	3
LIT 2011	Amer Lit to Civil War: AH2	3
LIT 2012	Amer Lit Aft Civil War: AH2	3
LIT 2021	British Lit to 1770: GT-AH2	3
LIT 2022	British Lit Since 1770: GT-AH2	3
LIT 2025	Intro to Shakespeare: AH2	3
LIT 2046	Literature of Women: AH2	3
LIT 2068	Celtic Literature: AH2	3

Ways of Thinking - GT-AH3

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

Foreign Languages - GT-AH4

Must be intermediate/2000-level.

FRE 2011	French Language III: AH4	3
GER 2011	German Language III : AH4	3
ITA 2011	Italian Language III: GT-AH4	3
JPN 2011	Japanese Language III : AH4	3
RUS 2011	Russian Language III: GT-AH4	3
SPA 2011	Spanish Language III: AH4	3
FRE 2012	French Language IV: AH4	3
GER 2012	German Lang IV: GT-AH4	3
ITA 2012	Italian Language IV: GT-AH4	3
JPN 2012	Japanese Language IV: AH4	3
RUS 2012	Russian Language IV: GT-AH4	3
SPA 2012	Spanish Language IV: AH4	3

History - GT-AH1 - 1 course (3 credits)

One guaranteed transfer History course GT-H1.

HIS 1310	Western Civ:Antiquity-1650: HI1	3
HIS 1320	Western Civ: 1650-Present: HI1	3
HIS 1110	The World: Antiquity-1500: HI1	3
HIS 1120	The World: 1500-Present: HI1	3
HIS 1210	US History to Reconst: HI1	3
HIS 1220	US History since Civil War:HI1	3
HIS 2005	Women in World History: HI1	3
HIS 2125	American Environment Hist: GT-HI1	3
HIS 2115	American Indian History: HI1	3
HIS 2105	Women in U.S. History: HI1	3
HIS 2135	Colorado History: HI1	3
HIS 2130	Hist of American West:HI1	3
HIS 2145	US History Since 1945: HI1	3
HIS 2610	Hist of Modern China: GT-HI1	3
HIS 2200	History of Latin America: HI1	3
HIS 2015	20th Century World History:HI1	3
HIS 2500	History-Islamic Civilization: GT-HI1	3
HIS 2310	Hist Christianity in World: GT-HI1	3
HIS 2120	US Foreign Relations History: GT-HI1	3

Social and Behavioral Sciences (6 credits)

Two guaranteed transfer Social and Behavioral Science courses (GT-SS1, GT-SS2, GT-SS3)

OR

One guaranteed transfer Social and Behavioral Science course (GT-SS1, GT-SS2, GT-SS3)

AND One guaranteed transfer History course (GT-HI1).

Economic and Political Systems - GT-SS1

ECO 1001	Econ Of Social Issues:SS1	3
ECO 2001	Prin of Macroeconomics: SS1	3
ECO 2002	Prin of Microeconomics: SS1	3
ECO 2045	Environmental Economics:SS1	3
POS 2020	Intro to Political Science: SS1	3
POS 1011	American Government: SS1	3
POS 1025	Amer State and Local Govt: SS1	3
POS 2005	International Relations: SS1	3
POS 1050	Current Polit Issues: SS1	3
POS 2025	Comparative Government: SS1	3

Geography - GT-SS2

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

Human Behavior, Cultural and Social Frameworks - GT-SS3

AGR 2106	World Population and Food: SS3	3
ANT 1001	Cultural Anthropology: SS3	3
ANT 1003	Intro to Archaeology: SS3	3
ANT 1208	Arch.of World Rock Art: SS3	3
ANT 2115	Native Peoples N. America: SS3	3
ANT 2125	Anth of Religion: SS3	3
ANT 2550	Medical Anthropology:SS3	3
COM 2300	Intercultural Comm: SS3	3
CRJ 1010	Intro to Criminal Justice: SS3	3
JOU 1005	Introduction to Mass Media: SS3	3
PSY 1001	General Psychology I: SS3	3
PSY 1002	General Psychology II : SS3	3
PSY 2105	Psychology of Gender: SS3	3
PSY 2107	Human Sexuality: SS3	3
PSY 2221	Social Psychology: SS3	3
PSY 2222	Psychology of Death/Dying: SS3	3
PSY 2440	Human Growth & Developmnt: SS3	3
PSY 2441	Child Development: SS3	3
PSY 2333	Health Psychology: SS3	3
PSY 2552	Abnormal Psychology: SS3	3
PSY 2771	Psychology of Personality: SS3	3
SOC 1001	Intro to Sociology I : SS3	3
SOC 1002	Intro to Sociology II: SS3	3
SOC 2005	Soc Of Family Dynamics:SS3	3
SOC 2007	Environmental Sociology:SS3	3
SOC 2015	Contemp. Social Problems: SS3	3
SOC 2016	Sociology Of Gender: SS3	3
SOC 2018	Sociology of Diversity: SS3	3
SOC 2020	Sociology of Religion: SS3	3
SOC 2031	Sociology-Deviant Behavior:SS3	3
SOC 2037	Sociology Of Death&Dying: SS3	3

Natural and Physical Sciences w/Lab - GT-SC1 - 3 courses (12-15 credits)

Choose three courses (two courses must be in sequence).

AST 1110	Planetary Astronomy w/Lab: SC1	4
AST 1120	Stellar Astronomy w/Lab: SC1	4
BIO 1111	Gen College Biology I/Lab: SC1	5
BIO 1112	Gen College Biology II/Lab:SC1	5
BIO 2101	Human Anatomy & Phys I w/Lab: SC1	4
BIO 2102	Human Anatomy & Phys II w/Lab: SC1	4
BIO 2104	Microbiology w/Lab: SC1	4
BIO 2120	General Zoology w/Lab: SC1	5
BIO 2121	Botany w/Lab: SC1	5
BIO 2124	Genetics: SC1	4
CHE 1111	Gen College Chem I/Lab: SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5
ENV 1111	Environmental Sci w/Lab: SC1	4
GEO 1011	Phys Geo: Lndfrms w/Lab: SC1	4
GEO 1012	Phys Geo:Clim & Eco w/Lab: SC1	4
GEY 1111	Physical Geology w/Lab: SC1	4
GEY 1112	Historical Geology w/Lab: SC1	4
GEY 1135	Environmental Geol w/Lab: SC1	4
GEY 1155	General Oceanography w/Lab:SC1	4
MET 1050	Gen Meteorology w/Lab: SC1	4
PHY 1111	Physics Alg-Based I/Lab: SC1	5
PHY 1112	Physics Alg-Based II/Lab: SC1	5
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5

Approved AS Electives (16-21 credits)

These courses transfer to one or more of the public four-year colleges or universities in Colorado. All courses will count toward the AS degree. However, transferability depends on the four-year institution. Additional courses may be transferable. For specific information, please consult an advisor in the Advising Center.

In addition to general education courses, you must complete an additional 16-21 credits of approved electives, **14 credits of which are to be taken from any of the science or math courses listed below. These include AST, BIO, CHE, CSC, ENV, GEO 1011 & GEO 1012, GEY, MAT, MET, and PHY.** Please see an advisor in your program of study for specific course suggestions. Credits earned above the minimum to satisfy a requirement may be applied to a different area.

Approved Science and Math electives - a minimum of 14 credits are required**Astronomy**

AST All courses

Biology

BIO All courses except 1005, 1006, and 1016

Chemistry

CHE All courses

Computer Science

CSC 1019	Intro. to Programming (lang)	3
CSC 1060	Computer Science I: (Language)	4
CSC 1061	Computer Sci II: (Language)	4
CSC 1065	Discrete Structures	4
CSC 2025	Computr Arch/Assembly Language	4
CSC 2036	C# Programming	4
CSC 2037	Advanced C# Programming and	4
CSC 2040	Java Programming	3

Data Science

DAT All courses

Engineering

EGG All courses

Engineering Graphics Technology		
EGT 1110	Intro Design/Engineering Apps	3
Environmental Science		
ENV 1111	Environmental Sci w/Lab: SC1 and	4
ENV 1010	Natural Disasters: SC2	3
Geography		
GEO 1011	Phys Geo: Lndfrms w/Lab: SC1 and	4
GEO 1012	Phys Geo:Clim & Eco w/Lab: SC1	4
Geology		
GEY	All courses except GEY 1108	
Mathematics		
MAT 1340	College Algebra: MA1 and above except 1320, 1400, 1220 and 1230	4
<i>Note: MAT 1260 is only recommended for students in health career programs.</i>		
Meteorology		
MET 1050	Gen Meteorology w/Lab: SC1	4
Physics		
PHY	All courses except 1105 and 1107	
Additional approved electives may be taken in addition to the 14 credits from Science and Math		
American Sign Language		
ASL 1121	American Sign Language I and	5
ASL 1122	American Sign Language II	5
Anthropology		
ANT	All courses	
Business		
BUS 2050	Intro to Nonprofit Orgs	3
Communication		
COM	All courses	
Computer Information Systems		
CIS 1018	Intro PC Applications	3
CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CIS 2068	Systems Analysis and Design I	3
Economics		
ECO	All courses	
Engineering		
EKG	All courses	
English		
ENG	All courses above 1022	
Foreign Language		
FL	ARA, FRE, GER, ITA, JPN, RUS, SPA- All courses except 1001 and 1002	
Geography		
GEO	All courses except 1011 and 1012	
Health and Wellness		
HWE 1050	Human Nutrition	3
Honors		
HNR	All courses	

Psychology		
PSY 2440	Human Growth & Developmnt: SS3	3
Women and Gender Studies		
WST 2000	Intro Women's Studies: SS3	3
WST 2100	Women and Social Action: GT-SS3	3
WST 2200	Goddess/Women Anct Wrld: SS3	3
WST 2300	Women's Sexuality: SS3	3
WST 2075	Special Topics	0-12
WST 2078	Women's Studies Seminar	0-12

Additional AS Catalog Requirements

The State-Guaranteed Colorado Community College General Education requirements and the Approved Elective Transferable courses have been incorporated into this AS degree. Completion of the degree with a C or higher in every course guarantees that you can transfer, upon admission, to any Colorado public four-year college or university with 60 transferable credits. Grades C or higher are required for all coursework. In addition, a minimum 2.0 grade point average is required for degree completion. This is an open-ended degree plan, allowing you to tailor your coursework toward a particular transfer institution and/or major. Please refer to other degree offerings for specific articulations and designations.

When choosing general education requirements and electives, it is important to contact an advisor and the college or university where you intend to transfer. You will graduate under the catalog requirements listed for the semester in which you were first enrolled. If you interrupt attendance for two consecutive semesters (excluding summer term) or more, and then return, the catalog pertaining to the semester of re-admission is the governing document. Also, you may choose to use the catalog that is in effect the semester you graduate. Be sure to obtain and keep a copy of the catalog governing your degree.

Other AS Degree Requirements

1. A minimum of 60 credits is required for the Associate of Science Degree. This must include 39-44 credits in general education transfer courses, which includes COM 1150, COM 1250, or COM 2300 (3 credits), and 16-21 credits in the areas specified above in approved electives.
2. If you are planning to transfer to a four-year college or university, consult an advisor for assistance in planning your program of study. Also consult the Transfer Guide for GPA requirements of the college to which you are planning to transfer.
3. You must complete a minimum of 15 credits through Red Rocks Community College. These credits must apply toward degree requirements.
4. You must submit a graduation application for your degree or certificate before the graduation application deadline for the term in which you intend to graduate. The application is available on the RRCC website. The deadline is published in the academic calendar for that semester.
5. No more than 6 credits of independent study course work may be applied toward an associate degree program.
6. There is no limit on special-topic courses allowed to count toward an AS degree. In individual cases, the limit will be determined by the program area. If you are taking special-topic courses, consult with your advisor regarding how these credits will apply toward a degree.
7. To earn multiple RRCC degrees, you must complete an additional 15 credits of coursework (above and beyond the original 60 credits required for the first degree) for each successive degree. These 15 credits must all apply toward the additional degree and must be completed through RRCC.
8. With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.

TOTAL CREDIT HOURS: 60

AGS Generalist Degree Requirements

General Education Requirements (15 credits).

Transferable electives (15 credits). General electives (30 credits). Select any courses numbered 100 or higher. Total Credits (60 required).

The AGS generalist degree is available if you would like to complete a broad program of both college transfer and/or career courses without the constraints of specialization. The AGS general education course requirements transfer to all public baccalaureate colleges and universities in Colorado. Career courses within this degree may be accepted in a four-year baccalaureate program; however, each course will be considered on an individual basis.

Communication (3 credits)

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3
COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
COM 1300	Comm and Popular Culture: AH1	3
COM 2300	Intercultural Comm: SS3	3

Mathematics (3 credits minimum)

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

Arts and Humanities (3 credits)

ART 1110	Art Appreciation: AH1	3
ART 1111	Art Hist Ancient/ Mediev: AH1	3
ART 1112	Art Hist Renaiss/1900: AH1	3
COM 1300	Comm and Popular Culture: AH1	3
DAN 1050	Dance History: AH1	3
FL 2011	FL 2011 (FRE, GER, ITA, JPN, RUS, SPA) and	3
FL 2012	FL 2012 (FRE, GER, ITA, JPN, RUS, SPA)	3
HUM 1003	Intro to Film Art: AH2	3
HUM 1015	World Mythology: AH2	3
HUM 1021	Humanities: Early Civ: AH2	3
HUM 1022	Humanities: Mediev-Mod: AH2	3
HUM 1023	Humanities: Modern Wrld: AH2	3
LIT 1015	Intro to Literature I: AH2	3
LIT 2001	World Lit to 1600: AH2	3
LIT 2002	World Lit After 1600: AH2	3
LIT 2005	Race, Ethnicity, Culture: AH2	3
LIT 2011	Amer Lit to Civil War: AH2	3
LIT 2012	Amer Lit Aft Civil War: AH2	3
LIT 2021	British Lit to 1770: GT-AH2	3
LIT 2022	British Lit Since 1770: GT-AH2	3
LIT 2025	Intro to Shakespeare: AH2	3
LIT 2046	Literature of Women: AH2	3
LIT 2068	Celtic Literature: AH2	3
MUS 1020	Music Appreciation: AH1	3
MUS 1021	Music Hist Mdl-Classical: AH1	3
MUS 1022	Music Hist Romantic-Prsnt: AH1	3
MUS 1023	Survey of World Music: AH1	3
MUS 1025	History of Jazz: AH1	3
PHI 1011	Intro to Philosophy: AH3	3
PHI 1012	Ethics: AH3	3
PHI 1013	Logic: AH3	3
PHI 1014	Comparative Religions: AH3	3
PHI 1015	World Religions-West: AH3	3
PHI 1016	World Religions-East: AH3	3
PHI 2014	Philosophy of Religion: AH3	3

PHI 2018	Environmental Ethics: GT-AH3	3
PHI 2020	Philosophy-Death & Dying: AH3	3
THE 1005	Theatre Appreciation: AH1	3
THE 1008	Theatre Script Analysis: AH1	3
THE 2011	Development of Theatre Greek-Renaissance: GT-AH1	3
THE 2012	Dev of Theatre Restor-Mod: AH1	3
THE 2015	Playwriting: AH1	3

Social and Behavioral Sciences (3 credits)

AGR 2106	World Population and Food: SS3	3
ANT 1001	Cultural Anthropology: SS3	3
ANT 1003	Intro to Archaeology: SS3	3
ANT 1208	Arch. of World Rock Art: SS3	3
ANT 2115	Native Peoples N. America: SS3	3
ANT 2125	Anth of Religion: SS3	3
ANT 2550	Medical Anthropology: SS3	3
COM 2300	Intercultural Comm: SS3	3
CRJ 1010	Intro to Criminal Justice: SS3	3
ECO 1001	Econ Of Social Issues: SS1	3
ECO 2001	Prin of Macroeconomics: SS1	3
ECO 2002	Prin of Microeconomics: SS1	3
ECO 2045	Environmental Economics: SS1	3
GEO 1005	World Regional Geography: SS2	3
GEO 1006	Human Geography: SS2	3
HIS 1310	Western Civ: Antiquity-1650: HI1	3
HIS 1320	Western Civ: 1650-Present: HI1	3
HIS 1110	The World: Antiquity-1500: HI1	3
HIS 1120	The World: 1500-Present: HI1	3
HIS 1210	US History to Recon: HI1	3
HIS 1220	US History since Civil War: HI1	3
HIS 2005	Women in World History: HI1	3
HIS 2125	American Environment Hist: GT-HI1	3
HIS 2115	American Indian History: HI1	3
HIS 2105	Women in U.S. History: HI1	3
HIS 2135	Colorado History: HI1	3
HIS 2130	Hist of American West: HI1	3
HIS 2145	US History Since 1945: HI1	3
HIS 2610	Hist of Modern China: GT-HI1	3
HIS 2200	History of Latin America: HI1	3
HIS 2015	20th Century World History: HI1	3
HIS 2500	History-Islamic Civilization: GT-HI1	3
HIS 2310	Hist Christianity in World: GT-HI1	3
HIS 2120	US Foreign Relations History: GT-HI1	3
JOU 1005	Introduction to Mass Media: SS3	3
POS 2020	Intro to Political Science: SS1	3
POS 1011	American Government: SS1	3
POS 1025	Amer State and Local Govt: SS1	3
POS 2005	International Relations: SS1	3
POS 1050	Current Polit Issues: SS1	3
POS 2025	Comparative Government: SS1	3
PSY 1001	General Psychology I: SS3	3
PSY 1002	General Psychology II : SS3	3
PSY 2105	Psychology of Gender: SS3	3
PSY 2107	Human Sexuality: SS3	3
PSY 2221	Social Psychology: SS3	3
PSY 2222	Psychology of Death/Dying: SS3	3
PSY 2440	Human Growth & Developmnt: SS3	3
PSY 2441	Child Development: SS3	3
PSY 2552	Abnormal Psychology: SS3	3
PSY 2771	Psychology of Personality: SS3	3
SOC 1001	Intro to Sociology I : SS3	3
SOC 1002	Intro to Sociology II: SS3	3
SOC 2005	Soc Of Family Dynamics: SS3	3
SOC 2007	Environmental Sociology: SS3	3
SOC 2015	Contemp. Social Problems: SS3	3
SOC 2016	Sociology Of Gender: SS3	3
SOC 2018	Sociology of Diversity: SS3	3
SOC 2020	Sociology of Religion: SS3	3
SOC 2031	Sociology-Deviant Behavior: SS3	3
SOC 2037	Sociology Of Death&Dying: SS3	3

Natural and Physical Sciences (3 credits)

Courses without Lab - GT-SC2:

AST 1150	Astrobiology: SC2	3
AST 1140	Astronomy Ancient Cultures: SC2	3
AST 1160	Cosmology: SC2	3
BIO 1016	Intro to Human Disease: SC2	3
ENV 1010	Natural Disasters: SC2	3
GEY 1108	Geology of National Parks: SC2	3

SCI 1105	Science in Society: SC2	3
Courses with Lab - GT-SC1:		
ANT 1005	Bio Anthropology w/Lab: SC1	4
AST 1110	Planetary Astronomy w/Lab: SC1	4
AST 1120	Stellar Astronomy w/Lab: SC1	4
BIO 1005	Science of Biology w/Lab: SC1	4
BIO 1111	Gen College Biology I/Lab: SC1	5
BIO 1112	Gen College Biology II/Lab: SC1	5
BIO 2101	Human Anatomy & Phys I w/Lab: SC1	4
BIO 2102	Human Anatomy & Phys II w/Lab: SC1	4
BIO 2104	Microbiology w/Lab: SC1	4
BIO 2120	General Zoology w/Lab: SC1	5
BIO 2121	Botany w/Lab: SC1	5
BIO 2124	Genetics: SC1	4
CHE 1011	Intro to Chemistry I/Lab: SC1	5
CHE 1111	Gen College Chem I/Lab: SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5
ENV 1111	Environmental Sci w/Lab: SC1	4
GEO 1011	Phys Geo: Lndfrms w/Lab: SC1	4
GEO 1012	Phys Geo: Clim & Eco w/Lab: SC1	4
GEY 1111	Physical Geology w/Lab: SC1	4
GEY 1112	Historical Geology w/Lab: SC1	4
GEY 1135	Environmental Geol w/Lab: SC1	4
GEY 1155	General Oceanography w/Lab: SC1	4
MET 1050	Gen Meteorology w/Lab: SC1	4
PHY 1105	Conceptual Physics w/Lab: SC1	4
PHY 1107	Energy Sci & Tec w/Lab: SC1	4
PHY 1111	Physics Alg-Based I/Lab: SC1	5
PHY 1112	Physics Alg-Based II/Lab: SC1	5
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
SCI 1055	Integrated Sci I w/Lab: SC1	4
SCI 1056	Integrated Sci II w/Lab: SC1	4

Approved AGS Generalist Degree Electives

These courses transfer to one or more of the public four-year colleges or universities in Colorado. All courses will count toward the AGS degree. However, transferability depends on the four-year institution. Additional courses may be transferable. For specific information, please consult an advisor in the Advising Center.

Note: Courses numbered below 1000 will not apply to any degree.

Accounting

ACC 1021	Accounting Principles I and	4
ACC 1022	Accounting Principles II	4

American Sign Language

ASL	All courses except 1101 and 1102
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Anthropology

ANT	All courses
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Art

ART	All courses
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Astronomy

AST	All courses
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Biology

BIO	All courses
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Business

BUS 1015	Introduction to Business	3
BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications and	3
BUS 2026	Business Statistics	3

Chemistry

CHE	All courses
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Communication

COM	All courses
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Computer Info. Systems

CIS 1018	Intro PC Applications	3
CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CIS 2068	Systems Analysis and Design I	3

Computer Science

CSC 1019	Intro. to Programming (lang)	3
CSC 1060	Computer Science I: (Language)	4
CSC 1061	Computer Sci II: (Language)	4
CSC 1065	Discrete Structures	4
CSC 2025	Computr Arch/Assembly Language	4
CSC 2036	C# Programming	4
CSC 2037	Advanced C# Programming and	4
CSC 2040	Java Programming	3

Criminal Justice

CRJ	CRJ 1010 and above
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Dance

DAN	All courses
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(Some Dance courses may transfer as Physical Education courses)

Early Childhood Education

ECE 1011	Intro to Early Childhood Education	3
ECE 1045	Intro to ECE Techniques	3
ECE 1031	Guidance Strategies for Young Children	3
ECE 2621	Curriculum Methods/Techniques	3
ECE 2381	ECE Child Growth & Development and	3
ECE 2101	Working w/Families & Communs	3

Economics

ECO	All courses
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Education

EDU	All courses above 2000
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Engineering

EGG	All courses
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English

ENG	All courses above 1022
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Environmental Science

ENV 1111	Environmental Sci w/Lab: SC1 and	4
ENV 1010	Natural Disasters: SC2	3

Foreign Language

FL	ARA, FRE, GER, ITA, JPN, RUS, SPA- All courses except 1001 and 1002
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Geography

GEO	All courses
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Geology

GEY	All courses
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Health and Wellness

HWE 1050	Human Nutrition	3
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History

HIS	All courses
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Honors

HNR	All courses
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Humanities

HUM	All courses
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Journalism

JOU 1005	Introduction to Mass Media: SS3	3
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Literature			
LIT	All courses		
Management			
MAN 2026	Principles of Management	3	
Marketing			
MAR 2016	Principles of Marketing	3	
Mathematics			
MAT	MAT 1240 and above		
Meteorology			
MET 1050	Gen Meteorology w/Lab: SC1	4	
Music			
MUS	All courses		
Outdoor Education			
OUT	All courses		
Philosophy			
PHI	All courses		
Physical Education			
PED	All courses		
Recreation			
REC	All courses		
Physics			
PHY	All courses		
Political Science			
POS	All courses		
Psychology			
PSY 1001	General Psychology I: SS3	3	
PSY 1002	General Psychology II : SS3	3	
PSY 1010	Career Development	3	
PSY 2105	Psychology of Gender: SS3	3	
PSY 2107	Human Sexuality: SS3	3	
PSY 2221	Social Psychology: SS3	3	
PSY 2222	Psychology of Death/Dying: SS3	3	
PSY 2440	Human Growth & Developmnt: SS3	3	
PSY 2441	Child Development: SS3	3	
PSY 2333	Health Psychology: SS3	3	
PSY 2444	Educational Psychology	3	
PSY 2552	Abnormal Psychology: SS3	3	
	and		
PSY 2771	Psychology of Personality: SS3	3	
Science			
SCI 1105	Science in Society: SC2	3	
SCI 1055	Integrated Sci I w/Lab: SC1	4	
SCI 1056	Integrated Sci II w/Lab: SC1	4	
Sociology			
SOC	All courses		
Theatre			
THE	All courses		

*Maximum 3 credits from OUT, PED, and/or REC may apply toward degree.

Additional AGS Generalist Catalog Requirements

Grades C or higher are required for all coursework. In addition, a minimum 2.0 grade point average is required for degree completion. This excludes designations and articulations in Business, Economics, Early Childhood Education, Elementary Education, Engineering, Mathematics, Psychology, and Spanish because special articulation agreements or designations exist for these fields of study.

When choosing general education requirements and electives, it is important to contact an advisor and the college or university where you intend to transfer. You will graduate under the catalog requirements listed for the semester in which you were first enrolled. If you interrupt attendance for two consecutive semesters (excluding summer term) or more, and then return, the catalog pertaining to the semester of re-admission is the governing document. You may also choose to use the catalog that is in effect the semester you graduate. Be sure to obtain and keep a copy of the catalog governing your degree. Courses numbered below 100 will not apply toward this degree.

Many four-year college transfer guides are available via the CICHE website at: <https://cdhe.colorado.gov/institutional-transfer-guides>.

Other AGS Generalist Degree Requirements

1. A minimum of 60 credits is required for the Associate of General Studies Generalist Degree.
2. You must complete 15 transferable elective credits which may include 3 credits in Outdoor Education (OUT), Physical Education (PED), and/or Recreation (REC). Please see an advisor in your area of emphasis for specific course suggestions.
3. If you are planning to transfer to a four-year college or university, you should consult an advisor for assistance in planning your program of study. Also consult the Transfer Guide for GPA requirements of the college to which you are planning to transfer.
4. You must complete a minimum of 15 credits through Red Rocks Community College.
5. To graduate, file an Application for Graduation before the deadline for the term in which you intend to graduate, according to the deadline published in the Academic Calendar for that term.
6. No more than 6 credits of independent study course work may be applied toward this degree.
7. There is no limit on special-topic courses allowed to count toward an AGS degree. In individual cases, the limit will be determined by the program area. If you are taking special-topic courses, you should consult with your advisor regarding how these credits will apply toward a degree.
8. To earn multiple RRCC degrees, you must complete an additional 15 credits of coursework (above and beyond the original 60 credits required for the first degree) for each successive degree. These 15 credits must all apply toward the additional degree and must be completed through RRCC.
9. With the approval of a faculty advisor and an instructional vice president, up to 3 credits of internship may apply toward this degree.

AAS Degree Requirements

Specific Program Requirements (45-60 credits)

The Associate of Applied Science degree is for those who are preparing for entry-level employment in a career-oriented program of study or who are upgrading skills in a specific occupation. This degree is not intended for transfer; however, courses are considered for transfer on an individual basis by the receiving college or university.

Individual departments may specify particular courses for general education. View the program in the catalog for specifics.

Individual departments / programs may have specific policies for grades / GPA for all coursework. D grades may not count for degree completion. In addition, a minimum 2.0 grade point average is required for degree completion.

Note: Courses numbered below 1000 will not apply to any degree.

General Education Courses (15 credits)

Communication (3 credits)

ENG/COM	1000 or higher	3
		Subtotal: 3

Mathematics (3 credits)

MAT 1140	Career Math	3
		Subtotal: 3

Credit from any two of the following three areas (6 credits)

Arts and Humanities	ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE (1000 and above)	3
Natural and Physical Sciences	AST, BIO, CHE, ENV, GEY, MET, PHY, SCI (1000 and above)	3
Social and Behavioral Sciences	AGR, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC (1000 and above)	3
		Subtotal: 6

Electives from any of the following areas (3 credits)

ENG/COM	Courses 1000 and above	
MAT	Courses 1000 and above	
Arts and Humanities	AGR, ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE (1000 and above)	
Natural and Physical Sciences	AST, BIO, CHE, ENV, GEY, PHY, SCI (1000 and above)	
Social and Behavioral Sciences	ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC (1000 and above) or the course CIS 1018 Intro PC Applications	
		Subtotal: 3
		Subtotal: 15

Other AAS Degree Requirements

1. A minimum of 60 credits is required for the Associate of Applied Science degree. Some degrees require more than 60 credits. These must include 45 credits in specific program courses and 15 credits in general education courses.
2. If you are planning to transfer to a four-year college or university, meet with an appropriate faculty advisor and consult the Transfer Guide.
3. You must complete a minimum of 15 credits in your program area at RRCC.
4. No more than six credits of independent study course work may be applied toward an Associate Degree program.

5. You must earn a cumulative grade point average of 2.0 (C average) in order to graduate.

6. You must submit a graduation application for your degree or certificate before the graduation application deadline for the term in which you intend to graduate. The application is available on the RRCC website. The deadline is published in the academic calendar for that semester.

7. There is no limit on special-topics courses that count toward an AAS degree. In individual cases, the limit will be determined by the program area. If you are taking special-topics courses, consult with a faculty advisor regarding how these credits will apply toward a degree.

8. To earn multiple RRCC degrees, you must complete an additional 15 credits of coursework (above and beyond the original 60 credits required for the first degree) for each successive degree. These 15 credits must all apply toward the additional degree and must be completed through Red Rocks Community College.

9. With the approval of a faculty advisor, no more than six credits of internship may count toward a degree. Some AAS degrees will require internship credits.

TOTAL CREDIT HOURS: 45-60

DWD Degrees and Requirements (AA & AS)

Statewide Transfer Articulation Agreements/Degrees With Designation (DWD)

A Statewide Transfer Articulation Agreement is an agreement among Colorado community colleges and universities. These agreements allow you to graduate from a community college with a 60-credit Associate of Arts (AA) or Associate of Science (AS) degree with designation, such as an Associate of Arts in Business; enroll with junior status at a university; and complete the bachelor’s degree in no more than an additional 60 credits (for a total of 120 credits). If you attend full-time (15 credits per semester) and follow the structured schedule, you can complete your bachelor’s degree in four years. All Statewide Articulation Agreements can be found on the Colorado Department of Higher Education website: <https://cdhe.colorado.gov/transfer-degrees>

Catalog DWD Program Requirements

The State-Guaranteed Colorado Community College General Education requirements and the Approved Elective Transferable courses have been incorporated into the AA and AS Designated degrees. A grade of C or higher is required for all coursework. Completion of the degree guarantees that you can transfer, upon admission, to specific Colorado public four-year colleges or universities with the appropriate 60 transferable credits. A minimum 2.0 cumulative grade point average (GPA) is required for degree completion.

You will graduate under the catalog requirements listed for the semester in which you were first enrolled. If you interrupt attendance for two consecutive semesters or more (excluding summer term) and then return, the catalog pertaining to the semester of re-admission is the governing document. You may also choose to use the catalog that is in effect the semester you graduate. Be sure to keep a copy of the appropriate catalog for your degree.

- If you are planning to transfer to a four-year college or university, you should consult an advisor for assistance in planning your program of study. Also consult the transfer guide for GPA requirements of the college to which you are planning to transfer.
- You must complete a minimum of 15 credits through Red Rocks Community College.
- You must submit a graduation application for your degree or certificate before the graduation application deadline for the term in which you intend to graduate. The application is available on the RRCC website. The deadline is published in the academic calendar for that semester.
- No more than 6 credits of independent study course work may be applied toward this degree.
- There is no limit on special-topic courses allowed to count toward an AA degree. In individual cases, the limit will be determined by the program area. If you are taking special-topic courses, you should consult with your advisor regarding how these credits will apply toward a degree.
- To earn multiple RRCC degrees, you must complete an additional 15 credits of coursework (above and beyond the original 60 credits required for the first degree) for each successive degree. These 15 credits must all apply toward the additional degree and must be completed through RRCC.
- With the approval of a faculty advisor and the instructional vice president, up to 3 credits of internship may apply toward this degree.
- All coursework must be completed within ten years of the date of graduation from Red Rocks Community College.

All Statewide Articulation Agreements can be found on the Colorado Department of Higher Education website: <https://cdhe.colorado.gov/transfer-degrees>.

Anthropology AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20ANTHROPOLOGY%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (33 credits)

(Written) Communication (6 credits)

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2 and	3
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics (3-4 credits)

GT Pathways Course(s)	One GT Pathways course (GT-MA1), prefer MAT 1260 Introduction to Statistics (There are some exceptions for different four-year schools; please see an advisor.)	3-4
		Subtotal: 3-4

Arts and Humanities (6 credits)

GT Pathways Course(s)	Two GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	6
		Subtotal: 6

History (3 credits)

GT Pathways Course(s)	One GT Pathways History course (GT-HI1)	3
		Subtotal: 3

Social and Behavioral Sciences (6 credits)

Two GT Pathways Social & Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)		
		Subtotal: 6

Natural and Physical Sciences (8 credits)

Two GT Pathways Natural & Physical Sciences courses (GT-SC1)		
		Subtotal: 8
		Subtotal: 33

Additional Required Courses (22 credits)

Additional Required Courses

One GT Pathways Social & Behavioral Sciences course (must be GT-SS2 or GT-SS3) 3 credits and the following:

COM 1150	Public Speaking	3
	or	
COM 1250	Interpersonal Comm: SS3	3
	or	
COM 2300	Intercultural Comm: SS3	3
GT Pathways Course(s)	One GT Pathways Arts and Humanities course (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	3
ANT 1001	Cultural Anthropology: SS3	3
ANT 1003	Intro to Archaeology: SS3	3
ANT 1005	Bio Anthropology W/Lab: SC1	4

GT Pathways Course(s)	One GT Pathways ANT course in Social & Behavioral Sciences (GT-SS3)	3
		Subtotal: 22

Electives (5-6 credits)

Electives

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives (p. 47) in AA Degree Requirements.

Subtotal: 5-6

TOTAL CREDIT HOURS: 60

Art History AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20ART%20HISTORY%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (31-32 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1), prefer MAT 1240: Mathematics for the Liberal Arts. *(There are some exceptions for different four year schools, please see an advisor.)*

Subtotal: 3

Arts and Humanities

Two GT Pathways Arts and Humanities courses (GT-AH 1, GT-AH2, GT-AH3, or GT-AH4). **EXCEPT** the courses listed in the Additional Required Courses section below.

Subtotal: 6

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1, GT-SS2 or GT-SS3)

Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural and Physical Sciences courses (GT-SC1, GT-SC2). One of these courses must have the required laboratory (GT-SC1).

Subtotal: 7-8

Subtotal: 31

Additional Requirements (18 credits)

Additional Required Courses

ART 1111	Art Hist Ancient/ Mediev: AH1	3
ART 1112	Art Hist Renaiss/1900: AH1	3
ART 1201	Drawing I	3
ART 1002	Visual Concepts 2-D Design	3
ART 1003	3-D Design	3

ART 1113	Art Hist 1900 to Present:AH1	3
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Please note: 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 towards graduation. Please check with the receiving institution to determine in which way these courses will be applied.

Subtotal: 18

Electives (10-11 credits)

Electives

See approved AA Electives (p. 47) in AA Degree Requirements.

Students planning to transfer to CSU-FC will be required to complete a 200-level foreign language for completion of the BA in Art – Art History. Students 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.

Subtotal: 10-11

TOTAL CREDIT HOURS: 60

Biology AS Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20BIOLOGY%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (36 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

MAT 2410	Calculus I: GT-MA1	5
		Subtotal: 5

Arts and Humanities

GT Pathways Course(s)	Two GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	6
		Subtotal: 6

History

GT Pathways Course(s)	One GT Pathways History course (GT-HI1)	3
		Subtotal: 3

Social and Behavioral Sciences

Two GT Pathways Social & Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 6

Natural and Physical Sciences

BIO 1111	Gen College Biology I/Lab: SC1	5
CHE 1111	Gen College Chem I/Lab: SC1	5
		Subtotal: 10
		Subtotal: 36

Additional Required Courses (20 credits)**Additional Required Courses**

BIO 1112	Gen College Biology II/Lab:SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5
PHY 1111	Physics Alg-Based I/Lab: SC1	5
PHY 1112	Physics Alg-Based II/Lab: SC1	5

Please note: If these credits are not required for the major at a receiving four-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.

Subtotal: 20

Electives (4 credits)**Electives**

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AS Electives (p. 50) in AS Degree Requirements.

Subtotal: 4

TOTAL CREDIT HOURS: 60**Business AA Designated Degree Requirements**

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20BUSINESS%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (37 credits).**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3

Subtotal: 6

Mathematics

MAT 1320	Finite Mathematics: MA1 or	4
MAT 1340	College Algebra: MA1	4
MAT 1400	Survey of Calculus: MA1 or a higher level Calculus course	4

Subtotal: 8

Arts and Humanities

GT Pathways Course(s)	Two GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	6
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Subtotal: 6

History

GT Pathways Course(s)	One GT Pathways History course (GT-HI1)	3
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Subtotal: 3

Social and Behavioral Sciences

ECO 2001	Prin of Macroeconomics: SS1	3
ECO 2002	Prin of Microeconomics: SS1	3

Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural & Physical Sciences courses (GT-SC1, GT-SC2)

Subtotal: 8

Subtotal: 37**Additional Required Courses (23 credits)****Additional Required Courses**

ACC 1021	Accounting Principles I	4
ACC 1022	Accounting Principles II	4
BUS 1015	Introduction to Business	3
BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications	3
BUS 2026	Business Statistics	3
COM 1150	Public Speaking	3

Subtotal: 23

TOTAL CREDIT HOURS: 60**Chemistry AS Designated Degree Requirements**

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20Chemistry%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements - Notes 1, 2, 3, 4 (30 credits)**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3

Subtotal: 6

Mathematics

MAT 2410	Calculus I: GT-MA1	5
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Subtotal: 5

Arts and Humanities

(See Notes 1, 2, 3)

GT Pathways Course(s)	One GT Pathways Arts and Humanities course (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	3
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Subtotal: 3

History

GT Pathways Course(s)	One GT Pathways History course (GT-HI1)	3
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Subtotal: 3

Social and Behavioral Sciences

One GT Pathways Social & Behavioral Science course (GT-SS1, GT-SS2, GT-SS3)

(See Notes 1, 2, 3)

Subtotal: 3

Natural and Physical Sciences

CHE 1111	Gen College Chem I/Lab: SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5

Subtotal: 10

Subtotal: 30**Additional Required Courses (29 credits)****Additional Required Courses**

MAT 2420	Calculus II: GT-MA1	5
MAT 2431	Calculus III/Engineer App: GT-MA1 (RRCC does not offer MAT 2431. MAT 2430 will be substituted.)	5
MAT 2430	MAT 2430 Calculus III: GT-MA1 will be substituted for MAT 2431	
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5

CHE 2111	Organic Chemistry I w/Lab	5
CHE 2112	Organic Chemistry II w/Lab	5
(See Note 4)		
		Subtotal: 29

Electives (1 credit)

Electives

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AS Electives (p. 50) in AS Degree Requirements.

Subtotal: 1

TOTAL CREDIT HOURS: 60

NOTES:

1. 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 a student, if admitted, junior standing and completion of the baccalaureate degree within an additional 60 semester hours at the receiving institution.
2. 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 & Humanities (AH1, AH2, AH3, or AH4) and one GT Pathways-approved course in Social & Behavioral Sciences (SS1, SS2, or SS3) are successfully completed at the receiving institution within the first 30 hours or 12 calendar months.
3. Students transferring to a four-year college/university under this Chemistry agreement are encouraged to 'reverse' transfer the one GT Pathways course in Arts & Humanities and the one GT Pathways course in Social & Behavioral Sciences (Note #2 above) back to their community college in order to complete the GT Pathways general education program and to earn their Associate of Science degree with a Chemistry designation.
4. Lecture and laboratory portions of Organic Chemistry, CHE 2111 and CHE 2112, must not be taken in an online delivery format.

Communication AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20Communication%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (31 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1), prefer MAT 1240 Mathematics for the Liberal Arts

Subtotal: 3-4

Arts and Humanities

Two GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4).

Suggested: COM 130 Communication and Popular Culture (GT-AH1)

Subtotal: 6

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences

COM 2300	Intercultural Comm: SS3 and One GT Pathways Social & Behavioral Science course (GT-SS1, GT-SS2, GT-SS3)	3
		Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural & Physical Sciences courses (GT-SC1, GT-SC2). One course must be with required laboratory.

Subtotal: 7

Subtotal: 31

Additional Required Courses (18 credits)

Please note: If these credits are not required for the major at a receiving four-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.

Additional Required Courses

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
COM 2220	Group Communication: SS3	3
		Subtotal: 9

Choose two (2) GT Pathways courses (total of 6 credits) from either: History (GT-HH1)

or

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

Subtotal: 6

Choose one (1) other three-credit course with a COM prefix

Subtotal: 3

Please note: Additional COM courses beyond the four courses (12 credit hours) identified above in the Additional Required Courses section may not count toward the Communication major at the receiving four-year institution.

Subtotal: 18

Electives (11 credits)

Electives

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives (p. 47) in AA Degree Requirements. Courses with a COM prefix are encouraged.

Subtotal: 11

TOTAL CREDIT HOURS: 60

Computer Science AS Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20Computer%20Science%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (33 credits)

(Written) Communication

Any (GT-CO1) course plus any (GT-CO2) course
OR
Any (GT-CO2) course plus any (GT-CO3) course

Subtotal: 6

**ENG 1022 or ENG 1031 required for Mines

Mathematics

MAT 2410	Calculus I: GT-MA1	5
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Subtotal: 5

(Additional coursework might be required to meet prerequisite requirements for calculus. Pre-requisite courses may apply toward elective credit hours.)

Arts and Humanities

Any two GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)
**For transfer to Mines, take PHI 2018 AND one additional course GT-AH course from the CSM CCCS H&SS Undergraduate Pre-Approved List

Subtotal: 6

History

One GT Pathways History course (GT-HI1)
**For transfer to Mines, take HIS 2015 OR another GT-HI1 course from the CSM CCCS H&SS Undergraduate Pre-Approved List

Subtotal: 3

Social and Behavioral Sciences

Any two GT Pathways Social & Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)
**For transfer to Mines, take ECO 2001 and ECO 2002

Subtotal: 6

Natural and Physical Sciences

Select from GT-SC1/GT-SC2 courses with at least one GT-SC1 course. GT-SC1/GT-SC2 courses in sequence (same discipline) are recommended (and may be required depending on the receiving institution—consult the advising office).

Courses must be selected in consultation with the advising office from the community college and from the intended transfer institution, if known.

Seven credit minimum; additional credits in this area will be applied toward electives.
**For transfer to Mines, select two courses from PHY 2111, PHY 2112, and CHE 1111

Subtotal: 7

Subtotal: 33

Additional Requirements (12 credits)

Please note: 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 towards graduation. Please check with the receiving institution to determine in which way these courses will be applied.

Additional Required Courses

CSC 1060	Computer Science I: (Language)	4
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CSC 1061	Computer Sci II: (Language)	4
CSC 2025	Computr Arch/Assembly Language	4

(Courses must be selected in consultation with the advising offices to ensure that the courses taken are in the preferred programming language. Additional coursework might be required to meet pre-requisite requirements for Computer Science I. Pre-requisite courses may apply toward elective credit hours.)

**CSC 2025 Not required at Mines; would transfer as free elective

Subtotal: 12

Electives (15 credits)

Please note: A total of 15 additional/elective credits are required to complete the Associate Degree with Designation. Some four-year institutions require specific courses on top of the required courses listed above. The total number of credits for these required courses plus free electives must equal at least 15.

Electives

MAT 2420	Calculus II: GT-MA1	5
CSC 1065	Discrete Structures	4
MAT 2540	Linear Algebra	3
MAT 2430	Calculus III: GT-MA1	4
	or	
MAT 2431	Calculus III/Engineer App: GT-MA1	5
CSC 2034	C++ Programming	4

*** CSC 2034 is available only at certain CCCS institutions. Students planning to transfer to CSU should consult an academic advisor about options for taking this course at Front Range or Arapahoe Community College and transferring the credits back to your home institution. Both CSC 1065 and CSC 2034 are available through Colorado State University Online as CS 220 and CS 253, respectively. Consult your academic advisor about registration and reverse transfer options.

For Colorado School of Mines, students are advised to use any remaining free elective credits to take MAT 2561, CHE 1111, or PHY 2112 (CSC 1065 will be accepted in transfer but the other courses are preferred).

(CSU will also accept MAT 2520 as an alternative to CSC 1065)

Subtotal: 15

TOTAL CREDIT HOURS: 60

Criminal Justice AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/CRIMINAL%20JUSTICE%20UPDATED%2007.2021.pdf>

Courses that Fulfill General Education Requirements (33 credits)

(Written) Communication (6 credits)

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3

Subtotal: 6

Mathematics (3-4 credits)

One GT Pathways course (GT MA1), prefer MAT 1260 Introduction to Statistics. (There are some exceptions for different four-year schools; please see an advisor.)

Subtotal: 3-4

Arts and Humanities (6 credits)

Two GT Pathways Arts & Humanities courses from two (2) different categories: (GT-AH1, GT-AH2, GT-AH3, GT-AH4)

Subtotal: 6

History (3 credits)

Choose one GT Pathways History course (GT-HI1)

HIS 1220	US History since Civil War:HI1	3
HIS 2115	American Indian History: HI1	3
HIS 2105	Women in U.S. History: HI1	3
HIS 2135	Colorado History: HI1	3
HIS 2145	US History Since 1945: HI1	3
Subtotal: 3		

Social and Behavioral Sciences (6 credits)

SOC 1001	Intro to Sociology I : SS3 and One GT Pathways Social & Behavioral Sciences course (GT- SS3)	3
Subtotal: 6		

Natural and Physical Sciences (8 credits)Two GT Pathways Natural & Physical Sciences courses (GT-SC1, GT-SC2).
One (1) course must be lab-based (GT-SC1)

Subtotal: 8
Subtotal: 33

Additional Required Courses (27 credits)**Additional Required Courses**

COM 1150	Public Speaking or	3
COM 1250	Interpersonal Comm: SS3	3
CRJ 1010	Intro to Criminal Justice: SS3	3
CRJ 1025	Policing Systems	3
CRJ 1045	Correctional Process	3

Choose two (2) courses from the following:

CRJ 1027	Crime Scene Investigation	3
CRJ 1035	Judicial Function	3
CRJ 2005	Principles of Criminal Law	3
CRJ 2009	Criminal Investigation I	3
CRJ 2030	Criminology	3
CRJ 2031	Intro Forensic Sci/Criminalist	3
CRJ 2035	Delinquent Behavior	3
CRJ 2036	CRJ Research Methods	3
CRJ 2057	Victimology	3
CRJ 2068	Criminal Profiling	3

Choose three (3) courses from the following:

CNG 2058	Digital Forensics	4
COM 2220	Group Communication: SS3	3
COM 2250	Organizational Communication	3
POS 1011	American Government: SS1	3
POS 1025	Amer State and Local Govt: SS1	3
PSY 207	Intro Forensic Psychology	3
PSY 2107	Human Sexuality: SS3	3
PSY 2221	Social Psychology: SS3	3
PSY 2552	Abnormal Psychology: SS3	3
SOC 2031	Sociology-Deviant Behavior:SS3	3

Electives (0-2 credits)

See approved AA Electives in AA Degree Requirements

**If these courses are applied to this second section of the Prescribed Curriculum (Additional Required Courses) for credit, they may not be applied to the first section of the Prescribed Curriculum (General Education Requirements) for credit.*

Subtotal: 27**TOTAL CREDIT HOURS: 60****Early Childhood Teacher Education AA Designated Degree Requirements**

<https://cdhe.colorado.gov/sites/highered/files/documents/Early%20Childhood%20Teacher%20Education%20UPDATED%2007.2021.pdf>

Early Childhood Teacher Education

Electives: <https://cdhe.colorado.gov/sites/highered/files/documents/EC%20Electives%20UPDATED%2009.29.21.pdf>

Courses that Fulfill General Education Requirements (33 credits)**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
Subtotal: 6		

Mathematics

MAT 1240	Math for Liberal Arts: MA1	4
Subtotal: 4		

Arts and Humanities

Choose two courses:

MUS 1020	Music Appreciation: AH1 or	3
ART 1110	Art Appreciation: AH1 or	3
THE 1005	Theatre Appreciation: AH1 and	3
LIT 1015	Intro to Literature I: AH2 or	3
LIT 2055	Children's Literature: AH2	3
Subtotal: 6		

History

Choose one course:

HIS 1210	US History to Reconst: HI1 or	3
HIS 1220	US History since Civil War:HI1	3
Subtotal: 3		

Social and Behavioral Sciences

GEO 1005	World Regional Geography: SS2	3
PSY 1001	General Psychology I: SS3	3
Subtotal: 6		

Natural and Physical Sciences

SCI 1055	Integrated Sci I w/Lab: SC1	4
SCI 1056	Integrated Sci II w/Lab: SC1	4
Subtotal: 8		

Students must successfully pass BOTH SCI 1055 & SCI 1056 with a C- or higher to satisfy the GT Pathways science requirement.

Subtotal: 33**Additional Required Courses (18 credits)****Additional Required Courses**

Please note: 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.

ECE 1011	Intro to Early Childhood Education	3
ECE 1045	Intro to ECE Techniques	3
ECE 1031	Guidance Strategies for Young Children	3
ECE 2621	Curriculum Methods/Techniques	3
ECE 2381	ECE Child Growth & Development	3
ECE 2101	Working w/Families & Communs	3

Subtotal: 18

TOTAL CREDIT HOURS: 60

Electives (9 credits)

Electives

For specific information and a list of approved credits for each institution, please consult with the teacher education faculty advisor. Transferability depends on the receiving four-year institution.

Subtotal: 9

TOTAL CREDIT HOURS: 60-61

Economics AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20Economics%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (37 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
		Subtotal: 6

Mathematics

MAT 2410	Calculus I: GT-MA1	5
		Subtotal: 5

Arts and Humanities

Three GT Pathways Arts and Humanities courses: GT-AH1, GT-AH2, GT-AH3, GT-AH4

Subtotal: 9

History

One GT Pathways History course: GT-HI1

Subtotal: 3

Social and Behavioral Sciences

ECO 2001	Prin of Macroeconomics: SS1	3
ECO 2002	Prin of Microeconomics: SS1	3
		Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural & Physical Sciences courses (GT-SC1, GT-SC2)

Subtotal: 8

Subtotal: 37

Additional Required Courses (3 credits)

Additional Required Courses

MAT 1260	Intro to Statistics: MA1	3
		Subtotal: 3

Electives (20 credits)

Electives

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives in AA Degree Requirements (p. 46).

Subtotal: 20

Elementary Teacher Education AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/Elementary%20Teacher%20Education%20UPDATED%2007.2021.pdf>

Elementary Teacher Education Electives:

<https://cdhe.colorado.gov/sites/highered/files/documents/El%20Ed%20STAA%20Electives%2007.2021.pdf>

Courses that Fulfill General Education Requirements (32 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
		Subtotal: 6

Some educator preparation programs require a B- in ENG121 as an admission requirement. However, a C- or better guarantees the general education GT-CO1 requirement has been met.

Mathematics

MAT 1220	Integrated Math I: MA1	3
MAT 1230	Integrated Math II: MA1	3
		Subtotal: 6

Completion of MAT 1220 & 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.

Arts and Humanities

Choose one course:

LIT 1015	Intro to Literature I: AH2	3
	or	
LIT 2001	World Lit to 1600: AH2	3
	or	
LIT 2002	World Lit After 1600: AH2	3
	or	
LIT 2011	Amer Lit to Civil War: AH2	3
	or	
LIT 2021	British Lit to 1770: GT-AH2	3
		Subtotal: 3

History

HIS 1210	US History to Reconst: HI1	3
		Subtotal: 3

Social and Behavioral Sciences

GEO 1005	World Regional Geography: SS2	3
POS 1011	American Government: SS1	3
		Subtotal: 6

Natural and Physical Sciences

SCI 1055	Integrated Sci I w/Lab: SC1	4
SCI 1056	Integrated Sci II w/Lab: SC1	4
		Subtotal: 8

Students must successfully pass BOTH SCI 1055 & SCI 1056 to satisfy the GT Pathways science requirement.

Subtotal: 32

Additional Required Courses (9 credits)

Additional Required Courses

COM 1150	Public Speaking	3
EDU 2211	Introduction to Education	3
PSY 2441	Child Development: SS3	3
		Subtotal: 9

Please note: 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.

Subtotal: 9

Electives (19 credits)

Electives

For specific information and a list of approved credits for each institution, please consult with the teacher education faculty advisor. Transferability depends on the receiving four-year institution.

Subtotal: 19

TOTAL CREDIT HOURS: 60

English AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20English%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (34 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
ENG 2001	English Composition III: GT-CO3	3
		Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1) but not MAT 1220 or MAT 1230.

Prefer: MAT 1240 Mathematics for the Liberal Arts

Subtotal: 3

Arts and Humanities

Three GT Pathways Arts & Humanities courses. These courses may only come from GT-AH1, GT-AH3, GT-AH4 categories.

NOTE: GT-AH2 Literature (LIT) courses will NOT be accepted to fulfill this requirement.

Subtotal: 9

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences

Two GT Pathways Social & Behavioral Science courses (GTSS1, GT-SS2, GT-SS3)

Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural & Physical Sciences courses, one must be with laboratory (GT-SC1)

Subtotal: 7

Subtotal: 34

Additional Required Courses (18 credits)

Please note: If these credits are not required for the major at a receiving four-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.

Additional Required Courses

COM 1150	Public Speaking	3
	or	
COM 1250	Interpersonal Comm: SS3	3
	or	
COM 2250	Organizational Communication	3
	Five GT Pathways Arts and Humanities LIT (AH2) courses	15

NOTE: Students are required to take a total of 5 (five) LIT courses (15 credits), 4 (four) of which must be at the 2000-level. Please consult with your receiving institution regarding best choices for literature courses.

Subtotal: 18

Electives (8 credits)

Electives

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives (p. 47) in AA Degree Requirements.

ENG 1021	English Composition I: CO1	3
ENG 2026	Fiction Writing	3
ENG 2027	Poetry Writing	3
ENG 2030	Creative Nonfiction	3
ENG 2031	Literary Magazine	3

Subtotal: 8

TOTAL CREDIT HOURS: 60

French AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20FRE NCH%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (31 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1), but not MAT 1220 or MAT 1230.

Prefer MAT 1240 Mathematics for the Liberal Arts.

Subtotal: 3

Arts and Humanities

FRE 2011	French Language III: AH4	3
FRE 2012	French Language IV: AH4	3
GT Pathways Course(s)	One GT Pathways Arts and Humanities course (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	3
		Subtotal: 9

History

One GT Pathways non-U.S. History course (GT-HI1).

Note: CSU-Ft. Collins requires two non-U.S. History courses.

Subtotal: 3

Social and Behavioral Sciences

One GT Pathways Social and Behavioral Sciences course (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 3

Natural and Physical Sciences

Two GT Pathways Natural & Physical Sciences courses (SC1, SC2). One of these courses must have the required laboratory (GT-SC1).

Subtotal: 7

Additional Required Courses (10 credits)

Please note: 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 towards graduation. Please check with the receiving institution to determine in which way these courses will be applied.

Additional Required Courses

FRE 1011	French Language I	5
FRE 1012	French Language II	5

Note: FRE 1011 and/or FRE 1012 may be waived, based on a student's proficiency level.

Subtotal: 10**Electives (19 credits)****Electives**

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives (p. 47) in AA Degree Requirements.

Please note: It is recommended, but not required, that a student take either COM 1150 Public Speaking or COM 1250 Interpersonal Communications.

Subtotal: 19**TOTAL CREDIT HOURS: 60****Geography AA Designated Degree Requirements****Subtotal: 13-14****TOTAL CREDIT HOURS: 60**

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20GEOGRAPHY%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (32-33 credits)**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3

Subtotal: 6**Mathematics**

One GT Pathways course (GT-MA1), prefer MAT 1260 Introduction to Statistics. (There are some exceptions for different four-year schools, please see an advisor).

Subtotal: 3-4**Arts and Humanities**

Two GT Pathways Arts and Humanities courses (GT-AH1, GT-AH2, GT-AH3)

Subtotal: 6**History**

One GT Pathways History course (GT-HI1)

Subtotal: 3**Social and Behavioral Sciences**

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1 or GT-SS2)

Subtotal: 6**Natural and Physical Sciences**

Two GT Pathways Natural & Physical Sciences courses (GT-SC1 only)

Please note: No GEO prefix science courses. GEY 1111 Physical Geology not recommended. For Adams State, students must take BIO 1111 General College Biology I, GT-SC1 and CHE 1011 Introduction to Chemistry I, GT-SC1).

Subtotal: 8**Additional Required Courses (14 credits)****Additional Required Courses**

Please note: If these credits are not required for the major at a receiving four-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.

GEO 1011	Phys Geo: Lndfrms w/Lab: SC1	4
GEO 1012	Phys Geo:Clim & Eco w/Lab: SC1	4
GEO 1005	World Regional Geography: SS2	3
GEO 1006	Human Geography: SS2	3

Subtotal: 14**Electives (13-14 credits)****Electives**

Maximum of 6 (six) credits may be in GEO or GIS prefix.

Number of elective credits may vary according to receiving institution.

You are advised to contact an advisor at the receiving institution.

Geology AS Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20GEOLOGY%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (36 credits)**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3

Subtotal: 6**Mathematics**

MAT 2410	Calculus I: GT-MA1	5
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Subtotal: 5**Arts and Humanities**

Two GT Pathways Arts and Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)

Subtotal: 6**History**

One GT Pathways History course (GT-HI1)

Subtotal: 3**Social and Behavioral Sciences**

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 6**Natural and Physical Sciences**

CHE 1111	Gen College Chem I/Lab: SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5

Subtotal: 10**Subtotal: 36**

Additional Required Courses (23 credits)

Additional Required Courses

Please note: If these credits are not required for the major at a receiving four-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.

GEY 1111	Physical Geology w/Lab: SC1	4
GEY 1112	Historical Geology w/Lab: SC1	4
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
		Subtotal: 23

Electives (1 credit)

Electives

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AS Electives (p. 50) in AS Degree Requirements.

Subtotal: 1
TOTAL CREDIT HOURS: 60

History AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20HISTORY%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (34 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1), prefer MAT 1240: Mathematics for the Liberal Arts. *(There are some exceptions for different four-year schools, please see an advisor.)*

Subtotal: 3-5

Arts and Humanities

Three GT Pathways Arts and Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)

Subtotal: 9

History

Students planning to transfer to University of Colorado-Boulder must take either HIS 1310 or HIS 1320 to fulfill this requirement.

HIS 1310	Western Civ:Antiquity-1650: HI1	3
	or	
HIS 1110	The World: Antiquity-1500: HI1	3
		Subtotal: 3

Social and Behavioral Sciences

Two GT Pathways Social & Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural and Physical Sciences courses (GT-SC1, GT-SC2). One course must be with required lab.

Subtotal: 7
Subtotal: 34

Additional Required Courses (15 credits)

Additional Required Courses

Please note: If these credits are not required for the major at a receiving four-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 course will be applied.

HIS 1320	Western Civ: 1650-Present: HI1	3
	or	
HIS 1120	The World: 1500-Present: HI1	3
HIS 1210	US History to Reconst: HI1	3
HIS 1220	US History since Civil War:HI1	3
COM 1150	Public Speaking	3
	or	
COM 1250	Interpersonal Comm: SS3	3
	and	
GT Pathways Course(s)	One additional GT Pathways HIS course (GT-HI1)	3

Subtotal: 15

Electives (11 credits)

Electives

Students planning to transfer to CSU-Ft. Collins are advised to complete at least two semesters of one college-level foreign language. For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable.

See approved AA Electives (p. 47) in AA Degree Requirements.

Subtotal: 11
TOTAL CREDIT HOURS: 60

Journalism AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20JOURNALISM%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (31 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1), prefer MAT 1240: Mathematics for the Liberal Arts. *(There are some exceptions for different four year schools, please see an advisor.)*

Subtotal: 3

Arts and Humanities

Two GT Pathways Arts and Humanities courses (GT-AH1, GT-AH2, GT-AH3, or GT-AH4).

Subtotal: 6

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1, GT-SS2 or GT-SS3)

Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural and Physical Sciences courses (GT-SC1, GT-SC2). One of these courses must have the required laboratory (GT-SC1).

Subtotal: 7

Subtotal: 31

Additional Requirements (12 credits)

Additional Required Courses

JOU 1005	Introduction to Mass Media: SS3	3
JOU 1006	Media News and Reporting	3
JOU 2025	New Media	3
		Subtotal: 9

Any one of the following:

JOU 1021	Photojournalism	3
JOU 2015	Publications Prod & Design	3
JOU 2031	Intro to Public Relations	4
JOU 2041	Feature and Magazine Writing	3
		Subtotal: 3

Subtotal: 12

Electives (17 credits)

Free Electives

See section on limitations regarding any additional courses taken in the major.

Electives CANNOT be additional JOU courses.

Students should consider using their free electives to consider exploring an additional area of focus.

Subtotal: 17

TOTAL CREDIT HOURS: 60

Mathematics AS Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20MATHEMATICS%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (39 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
		or
ENG 1022	English Composition II: CO2	3
		and
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

MAT 2410	Calculus I: GT-MA1	5
		Subtotal: 5

Arts and Humanities

Three GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)

Subtotal: 9

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 6

Natural and Physical Sciences

PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
		Subtotal: 10

Subtotal: 39

Additional Required Courses (16-17 credits)

Additional Required Courses

Please note: If these credits are not required for the major at a receiving four-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.

COM 1150	Public Speaking	3
		or
COM 1250	Interpersonal Comm: SS3	3
MAT 2420	Calculus II: GT-MA1	5
MAT 2430	Calculus III: GT-MA1	4
		or
MAT 2431	Calculus III/Engineer App: GT-MA1	5
CSC 1060	Computer Science I: (Language)	4
		Subtotal: 16-17

NOTE: CSU-Ft Collins requires a different computer science course than the community college course. Students should seek advising at CSU-Ft Collins for information on the appropriate computer science course to take.

Electives (4-5 credits)

Electives

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AS Electives (p. 47) in AS Degree Requirements.

Subtotal: 4-5

TOTAL CREDIT HOURS: 60

Philosophy AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20PHILOSOPHY%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (31 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
		or
ENG 1022	English Composition II: CO2	3
		and
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1), prefer MAT 1240: Mathematics for the Liberal Arts. *(There are some exceptions for different four-year schools, please see an advisor.)*

Subtotal: 3-4

Arts and Humanities

Two GT Pathways Arts and Humanities courses (GT-AH1, GT-AH2, GT-AH3)

Subtotal: 6

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences

Two GT Pathways Social & Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural & Physical Sciences courses (GT-SC1, GT-SC2). One of these courses must have the required laboratory (GT-SC1).

Subtotal: 7

Subtotal: 31

Additional Required Courses (15 credits)**Additional Required Courses**

Please note: If these credits are not required for the major at a receiving four-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.

PHI 1011	Intro to Philosophy: AH3	3
PHI 1012	Ethics:AH3	3
PHI 1013	Logic: AH3	3
		Subtotal: 9

And Choose two (2) courses from the following:

PHI 2014	Philosophy of Religion: AH3	3
PHI 2018	Environmental Ethics: GT-AH3	3
PHI 2020	Philosophy-Death & Dying: AH3	3
		Subtotal: 6
		Subtotal: 15

Electives (14 credits)**Electives**

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives (p. 47) in AA Degree Requirements.

Subtotal: 14

TOTAL CREDIT HOURS: 60

Physics AS Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20PHY%20SICS%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (36 credits)**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
or		
ENG 1022	English Composition II: CO2	3
and		
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

MAT 2410	Calculus I: GT-MA1	5
		Subtotal: 5

Arts and Humanities

Three GT Pathways Arts and Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)

Subtotal: 9

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences

One GT Pathways Social and Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 3

Natural and Physical Sciences

PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
		Subtotal: 10
		Subtotal: 36

Additional Required Courses (24 credits)

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

Additional Required Courses

PHY 2113	PHY Calc-Base III: Modern	3
MAT 2420	Calculus II: GT-MA1	5
MAT 2430	Calculus III: GT-MA1	4
or		
MAT 2431	Calculus III/Engineer App: GT-MA1	5
or		
MAT 2561	Differential Equations with Engineering Applications: GT-MA1	4
or		
CHE 1111	Gen College Chem I/Lab: SC1	5
or		
CSC 1060	Computer Science I: (Language)	4
or		
CHE 1112	Gen College Chem II/Lab: SC1	5

NOTES:

MAT 2430 or MAT 2431: Please note: If you choose to take one of these courses, 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.

Students planning to transfer to University of Colorado Boulder must take CHE 1112 (not CSC 1060) to fulfill this requirement.

Students planning to transfer to University of Northern Colorado must take CSC 1060 (not CHE 1112) to fulfill this requirement.

Students planning to transfer to Fort Lewis College or University of Colorado Colorado Springs must take both CSC 1060 and CHE 1112.

Students planning to transfer to a receiving institution not listed here may choose either one of these courses.

Subtotal: 24

TOTAL CREDIT HOURS: 60

Political Science AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20POLITICAL%20SCIENCE%20UPDATED%2007.2021.pdf>

Courses that Fulfill General Education Requirements (32 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1). Prefer MAT 1260, but not MAT 1220 or MAT 1230.

Subtotal: 3

Arts and Humanities

Two GT Pathways Arts and Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)

Subtotal: 6

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences

ECO 2001	Prin of Macroeconomics: SS1	3
ECO 2002	Prin of Microeconomics: SS1	3

Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural & Physical Sciences courses (GT-SC1)

Subtotal: 8

Subtotal: 32

Additional Required Courses (12 credits)

Additional Required Courses

Please note: If these credits are not required for the major at a receiving four-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.

POS 2020	Intro to Political Science: SS1	3
POS 1011	American Government: SS1	3
POS 2005	International Relations: SS1	3
POS 2025	Comparative Government: SS1	3

Please note: Additional POS courses taken beyond the four courses (12 credit hours) identified above may not count toward the Political Science major at the receiving four-year institution.

Subtotal: 12

Electives (16 credits)

Electives

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives (p. 47) in AA Degree Requirements.

Subtotal: 16

TOTAL CREDIT HOURS: 60

Psychology AA Designated Degree Requirements

https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20Psychology%20AA_BA%20FINAL%2006.2021.pdf

Courses that Fulfill General Education Requirements (34-36 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

One GT Pathways course (GT-MA1), prefer MAT 1260 Introduction to Statistics. *(There are some exceptions for different four-year schools, please see an advisor.)*

Subtotal: 3-4

Arts and Humanities (9 credits)

Three GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4).

No more than two (2) courses from any one category.

Subtotal: 9

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences (6 credits)

Two GT Pathways Social and Behavioral Science courses (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 6

Natural and Physical Sciences (7-8 credits)

One GT Pathways BIOLOGY course – must be GT-SC1 (course with lab).

One GT Pathways (GT-SC1) course of the student's choosing.

Subtotal: 7-8

Subtotal: 34-36

Additional Required Courses (18 credits)

Additional Required Courses

Please note: If these credits are not required for the major at a receiving four-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.

PSY 1001	General Psychology I: SS3	3
PSY 1002	General Psychology II : SS3	3
COM 1150	Public Speaking	3
	or	
COM 1250	Interpersonal Comm: SS3	3
GT Pathways Course(s)	Three GT Pathways Psychology courses (GT-SS3)	9

Subtotal: 18

Electives (6-8 credits)

Electives

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives (p. 47) in AA Degree Requirements.

Subtotal: 6-8
TOTAL CREDIT HOURS: 60

Psychology AS Designated Degree Requirements

https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20Psychology%20AS_BS%20FINAL%2006.2021.pdf

Courses that Fulfill General Education Requirements (38 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3
		Subtotal: 6

Mathematics

MAT 1340	College Algebra: MA1	4
		Subtotal: 4

Arts and Humanities

Six (6) additional credits from at least two different categories of GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4) and the following:

PHI 1011	Intro to Philosophy: AH3	3
	or	
PHI 1012	Ethics:AH3	3
		Subtotal: 9

History

One GT Pathways History course (GT-HI1)	3
Subtotal: 3	

Social and Behavioral Sciences

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1,GT-SS2,GT-SS3)	6
Subtotal: 6	

Natural and Physical Sciences

BIO 1111	Gen College Biology I/Lab: SC1	5
CHE 1111	Gen College Chem I/Lab: SC1	5
		Subtotal: 10
		Subtotal: 38

Additional Required Courses (9 credits)

Additional Required Courses

Please note: If these credits are not required for the major at a receiving four-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.

PSY 1001	General Psychology I: SS3	3
PSY 1002	General Psychology II : SS3	3
COM 1150	Public Speaking	3
	or	

COM 1250	Interpersonal Comm: SS3	3
		Subtotal: 9

Electives (13 credits)

Electives

Students planning to transfer to University of Colorado-Denver 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.

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AS Electives (p. 50) in AS Degree Requirements.

Subtotal: 13
TOTAL CREDIT HOURS: 60

Public Health AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20PUBLIC%20HEALTH%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (32-34 credits)

(Written) Communication (6 credits)

Any (GT-CO1) course plus any (GT-CO2) course	
OR	
Any (GT-CO2) course plus any (GT-CO3) course	
Subtotal: 6	

Mathematics (3 credits)

MAT 1260	Intro to Statistics: MA1	3
		Subtotal: 3

Arts and Humanities (6 credits)

Any two GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, or GT-AH4)	
Subtotal: 6	

History (3 credits)

One GT Pathways History course (GT-HI1)	3
Subtotal: 3	

Social and Behavioral Sciences (6 credits)

PSY 1001	General Psychology I: SS3	3
PLUS any one of the following:		
PSY 2440	Human Growth & Developmnt: SS3	3
PSY 2333	Health Psychology: SS3	3
PSY 2552	Abnormal Psychology: SS3	3
ANT 2550	Medical Anthropology:SS3	3
		Subtotal: 6

Natural and Physical Sciences (8-10 credits)

BIO 1111	Gen College Biology I/Lab: SC1	5
BIO 1112	Gen College Biology II/Lab:SC1	5

OR Choose TWO

BIO 1004	Biology: A Human Approach: SC1	4
BIO 1005	Science of Biology w/Lab: SC1	4
ANT 1005	Bio Anthropology W/Lab: SC1	4
		Subtotal: 8-10
		Subtotal: 32-34

Additional Requirements (12 credits)

Please note: 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 towards graduation. Please check with the receiving institution to determine in which way these courses will be applied.

Choose one Communication course from:

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
COM 2300	Intercultural Comm: SS3	3

Choose one Philosophy course from:

PHI 1012	Ethics:AH3	3
PHI 1013	Logic: AH3	3

Choose one additional course from:

ANT 2550	Medical Anthropology:SS3	3
BIO 1016	Intro to Human Disease: SC2	3
PSY 2222	Psychology of Death/Dying: SS3	3
PSY 2333	Health Psychology: SS3	3
SOC 2037	Sociology Of Death&Dying: SS3	3

* Choose ANT 2550 or PSY 2333 if not taken to fulfill the Social & Behavioral Science Requirement.

** BIO 1016 course can be used to replace Health and Disease at Fort Lewis College

Choose one additional course from MA1, SC1, or SC2

Recommended courses:

BIO 2116	Pathophysiology	4
BIO 2104	Microbiology w/Lab: SC1	4
ENV 1111	Environmental Sci w/Lab: SC1	4

Subtotal: 12

Electives (14-16 credits)

Free Electives (choose in consultation with a program advisor at the receiving four-year institution)

Subtotal: 14-16

TOTAL CREDIT HOURS: 60

Sociology AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20SOCIOLOGY%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (35-36 credits)**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3

Subtotal: 6

Mathematics

One GT Pathways course (GT-MA1), prefer MAT 1260 Introduction to Statistics. (There are some exceptions for different four-year schools; please see an advisor.)

Subtotal: 3-4

Arts and Humanities

Any 3 approved GT Pathways Arts & Humanities courses (GT-AH1, GT-AH2, GT-AH3, GT-AH4)

Subtotal: 9

History

One GT Pathways History course (GT-HI1)

Subtotal: 3

Social and Behavioral Sciences

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural & Physical Sciences courses (GT-SC1)

Subtotal: 8

Subtotal: 35-36

Additional Requirements (18 credits)**Additional Required Courses**

Please note: If these credits are not required for the major at a receiving four-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.

COM 1150	Public Speaking	3
	or	
COM 1250	Interpersonal Comm: SS3	3
SOC 1001	Intro to Sociology I : SS3	3
SOC 1002	Intro to Sociology II: SS3	3

Subtotal: 9

Please note: Additional SOC courses beyond the five courses (15 credit hours) identified above may not count toward the Sociology major at the receiving four-year institution.

Plus three GT Pathways SOC courses in Social and Behavioral Sciences (GT-SS3)

Subtotal: 9

Subtotal: 18

Electives (6-7 credits)**Electives**

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives (p. 47) in AA Degree Requirements.

Subtotal: 6-7

TOTAL CREDIT HOURS: 60

Spanish AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20SPANISH%20UPDATED%2007.2021.pdf>

Courses that Fulfill General Education Requirements (34 credits)**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3

Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1), prefer MAT 1240: Mathematics for the Liberal Arts. *(There are some exceptions for different four year schools, please see an advisor.)*

Subtotal: 3-4**Arts and Humanities**

SPA 2011	Spanish Language III: AH4	3
SPA 2012	Spanish Language IV: AH4	3
GT Pathways Course(s)	One GT Pathways Arts and Humanities course (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	3

Subtotal: 9

PLEASE NOTE: Those students who have a higher proficiency level than is required for SPA 2011 or SPA 2012 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.

History

HIS 2200	History of Latin America: HI1 or another GT Pathways History course (GT-HI1) focusing on the Spanish speaking world (non-U.S.) or another GT Pathways non-US History course	3
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Subtotal: 3**Social and Behavioral Sciences**

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1, GT-SS2, GT-SS3)

Subtotal: 6**Natural and Physical Sciences**

Two GT Pathways Natural and Physical Sciences courses (GT-SC1, GT-SC2). One of these courses must have the required laboratory (GT-SC1).

Subtotal: 7**Subtotal: 34****Additional Requirements (13 credits)****Additional Required Courses**

Please note: if these credits are not required for the major at a receiving four-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.

SPA 1011	Spanish Language I	5
SPA 1012	Spanish Language II	5
COM 1150	Public Speaking or Interpersonal Comm: SS3	3
COM 1250	Interpersonal Comm: SS3	3

PLEASE NOTE: SPA 1011 and/or SPA 1012 may be waived based on a student's proficiency level. Students should consult a departmental advisor at the four-year institution.

Subtotal: 13**Electives (13 credits)****Electives**

Suggested courses: 2000-level Spanish courses; courses outside the Spanish department with content related to the Spanish-speaking world. For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable. See approved AA Electives (p. 47) in AA Degree Requirements.

Subtotal: 13**TOTAL CREDIT HOURS: 60****Studio Art AA Designated Degree Requirements**

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20STUDIO%20ART%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (31 credits)**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2 or English Composition II: CO2 and GT Pathways-approved GT-CO3 course	3
ENG 1022	English Composition II: CO2 and GT Pathways-approved GT-CO3 course	3
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3

Subtotal: 6**Mathematics**

One GT Pathways Mathematics course (GT-MA1), prefer MAT 1240: Mathematics for the Liberal Arts. *(There are some exceptions for different four year schools, please see an advisor.)*

Subtotal: 3-4**Arts and Humanities**

Two GT Pathways Arts and Humanities courses (GT-AH2, GT-AH3, or GT-AH4). No GT-AH1 courses.

Subtotal: 6**History**

One GT Pathways History course (GT-HI1)

Subtotal: 3**Social and Behavioral Sciences**

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1, GT-SS2 or GT-SS3)

Subtotal: 6**Natural and Physical Sciences**

Two GT Pathways Natural and Physical Sciences courses (GT-SC1, GT-SC2). One of these courses must have the required laboratory (GT-SC1).

Subtotal: 7**Subtotal: 31****Additional Requirements (21 credits)****Additional Required Courses**

ART 1111	Art Hist Ancient/ Mediev: AH1	3
ART 1112	Art Hist Renaiss/1900: AH1	3
ART 1201	Drawing I	3
ART 1002	Visual Concepts 2-D Design	3
ART 1003	3-D Design	3
ART 1202	Drawing II or Figure Drawing I	3
ART 1203	Figure Drawing I	3
Any 3-credit Studio Art course	Any 3-credit Studio Art course	3

Subtotal: 21

Electives (8 credits)**Electives**

See approved AA Electives (p. 47) in AA Degree Requirements.

Students planning to transfer to CSU-Ft. Collins for completion of the BA in Studio Art must complete two semesters of one foreign language for their electives OR be able to pass the CSU-Ft. Collins Foreign Language placement exam at the sophomore level. It may not be possible to complete the BA in Studio Art in two years without this prior foreign language competency.

For specific information, please consult an advisor in the Advising Center. Transferability depends on the receiving four-year institution. Additional courses may be transferable.

Subtotal: 8

TOTAL CREDIT HOURS: 60

Theatre AA Designated Degree Requirements

<https://cdhe.colorado.gov/sites/highered/files/documents/STAA%20THEATRE%20FINAL%2006.2021.pdf>

Courses that Fulfill General Education Requirements (31 credits)**(Written) Communication**

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
	or	
ENG 1022	English Composition II: CO2	3
	and	
GT Pathways Course(s)	GT Pathways-approved GT-CO3 course	3

Subtotal: 6

Mathematics

One GT Pathways Mathematics course (GT-MA1), prefer MAT 1240: Mathematics for the Liberal Arts. *(There are some exceptions for different four-year schools, please see an advisor.)*

Subtotal: 3-4

Arts and Humanities

THE 1005	Theatre Appreciation: AH1	3
THE 2011	Development of Theatre Greek-Renaissance: GT-AH1	3

Subtotal: 6

Students planning to attend University of Colorado Boulder in Theater should consult UCB Theater advisors regarding THE 1005 Theatre Appreciation course.

History

Any one GT Pathways Arts & Expression course—in History (GT-AH1)

Subtotal: 3

Social and Behavioral Sciences

Two GT Pathways Social and Behavioral Sciences courses (GT-SS1, GT-SS2 or GT-SS3)

Subtotal: 6

Natural and Physical Sciences

Two GT Pathways Natural and Physical Sciences courses (GT-SC1, GT-SC2). One of these courses must have the required laboratory (GT-SC1).

Subtotal: 7

Subtotal: 31

Additional Requirements (18 credits)

Please note: 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 towards graduation. Please check with the receiving institution to determine in which way these courses will be applied.

Additional Required Courses

THE 1008	Theatre Script Analysis: AH1	3
THE 1011	Acting I	3
THE 1016	Technical Theatre	3
THE 2012	Dev of Theatre Restor-Mod: AH1	3
THE 2015	Playwriting: AH1	3

• Choose one (1) course from the following:

THE 1031	Theatre Production I	3
THE 1032	Theatre Production II	3
THE 2031	Theatre Production III	3
THE 2032	Theatre Production IV	3

Subtotal: 18

Electives (11 credits)**Electives**

See approved AA Electives (p. 47) in AA Degree Requirements.

Students interested in attending MSU Denver or CSU-Fort Collins are advised to take COM 1150 – Public Speaking.

Students who plan to transfer to UCB or UCCS may not take elective courses with a THE prefix.

Students who plan to transfer to CSU-Fort Collins are advised to take THE 1012, MUS 1020 and ART 1110 as CCCS elective credits.

Subtotal: 11

TOTAL CREDIT HOURS: 60

Bachelor of Applied Science Degrees (BAS)

These degrees are for those who are preparing for employment in a career-oriented program of study or upgrading in a specific occupation. This degree is not intended for transfer; however, courses are considered for transfer on an individual basis by the receiving graduate program offered at a 4-year college or university.

Secure Software Development

The Bachelor of Applied Science (BAS) degree in Secure Software Development, “The Software side of Cyber Security”. The degree requires completion of 120 credit hours. Students will be required to declare the BAS through admissions. Students are required to meet with Computer Technology/Computer Science faculty to set up an initial subject-specific advising meeting; develop a student plan; and review their general education requirements/transfer credits. Satisfactory completion (grade of C or higher) is mandatory for all core and computer prefixed (CIS, CNG, CSC, CWB) degree coursework. All skill set courses (CIS, CNG, CSC and CWB) must have been completed within 7 years of the current date for use within the earned program. Course work for this degree can be completed in traditional, hybrid, or online format.

This area of emphasis prepares you to become a programmer in secure software development. You will develop skills using multiple programming languages and databases and implement component security using industry’s best security practices. You will also design, develop, and test secure software applications; conduct software penetration testing; and provide recommendations for reducing computer security risks. This degree also focuses on critical elements of software security; implement techniques for mitigating security risks; and you will identify and develop software solutions to threats and attacks in order to minimize risk and protect privacy.

Secure Software Development BAS Degree (p. 97)

Water Quality Management Technology

The Bachelor of Applied Science (BAS) degree in Water Quality Management prepares students for careers in the water industry, such as: utility management, environmental health, watershed science, and water resource management. Interested students must complete a BAS application in order to enroll in upper division WQM courses. The BAS application can be found on the department website. Students may also meet with WQM staff or faculty to set up an initial meeting in order to identify their preferred career and educational pathways. Students should also meet with Academic Advising to review their general education requirements and transfer credits. Satisfactory completion, grade of C or higher, is mandatory for all core WQM coursework.

Water Quality Management BAS Degree (p. 143)

Master's Degree (MPAS)

Physician Assistant Studies

The Red Rocks Community College Physician Assistant Program is the only Master's degree-offering community college program in the U.S. The Physician Assistant Master's degree (MPAS) is a full-time, 27-month, 120 credit program where cohorts complete a prearranged schedule. There is no provision for exemption of classes, part-time participation, advanced placement, or transfer of academic credit. www.rccc.edu/physician-assistant/masters

In addition to the standard policies and procedures for RRCC, the PA Program maintains graduate policies. See PA Program Manual for further explanation: www.rccc.edu/sites/default/files/physician-assistant-PAPmanual.pdf

MPAS Admissions

Applicants for the PA Program must apply through CASPA, pay all required application fees, hold a baccalaureate degree, have taken the required prerequisites, and have 2000 hours of paid, health care-relevant experience (see www.rccc.edu/physician-assistant/admission)

MPAS Assessment

Graduate students are expected to achieve all passing grades and uphold professionalism standards as outlined in the PA Program Manual to progress within the curriculum.

MPAS Tuition/Financial Aid

Tuition for the Master's Degree is a flat rate tuition set for the entirety of the 27-month program each July by the SBOCCE Board. The full-time financial aid course load for graduate students is 5 or more credit hours for any semester.

Master of Physician Assistant Studies MPAS Degree (p. 133)

Guarantee Transfer Courses

To help you avoid taking unnecessary courses and thus help you earn your degree in as little time as possible, the Colorado Department of Higher Education, in consultation with Colorado's public colleges and universities, has developed a uniform general education curriculum that forms the core of most bachelor's degrees and is guaranteed to transfer between all public, state-accredited colleges and universities. Colorado has also developed guided degree pathways which consist of specific required credit hours of courses from the following content areas: communication, mathematics, humanities, natural sciences, and social sciences. You should always seek advising from the college or university you plan to attend to ensure you are selecting the appropriate coursework for your degree.

Guarantee transfer courses in which you earn a grade of C or higher will always transfer and the credit will apply to GT Pathways requirements in every liberal arts & sciences bachelor's degree at every public Colorado institution. Depending on the intended bachelor's degree, GT Pathways course credit may also be applied to major and elective requirements at the receiving institution's discretion.

Please note that the institution to which you transfer may not accept credits you earned through Advanced Placement (AP), College Level Examination Program (CLEP), or similar tests. You should always contact an advisor at the receiving college or university to ensure transferability of your credits.

Please remember to check the following website for the most current updates: <http://higherred.colorado.gov/Academics/Transfers/gtPathways/curriculum.html>.

GT Courses (Guarantee Transfer)

Below are the GT Pathways general categories followed by specific, state-approved courses in each category.

Arts & Humanities

- GT-AH1: Arts and Expression
- GT-AH2: Literature and Humanities
- GT-AH3: Ways of Thinking
- GT-AH4: Foreign Languages (*must be Intermediate/2000 level*)

Communication

- GT-CO1: Introductory Writing Course
- GT-CO2: Intermediate Writing Course

History

- GT-HI1: History

Mathematics

- GT-MA1: Mathematics
- MAT 1240, MAT 1320, MAT 1400, MAT 1260: Does not meet the Mathematics GT Core requirement for an AS degree.*

Natural & Physical Sciences

- GT-SC1: With a required laboratory
- GT-SC2: Without a required laboratory
- Students MUST successfully pass BOTH SCI 1055 & SCI 1056 to satisfy the GT Pathways science requirement. Recommended for Teacher Education only.*

Social & Behavioral Sciences

- GT-SS1: Economic or Political Systems
- GT-SS2: Geography
- GT-SS3: Human Behavior, Culture, or Social Frameworks

Arts and Humanities GT Courses

GT-AH1 (Arts and Expression)

ART 1110	Art Appreciation: AH1	3
ART 1111	Art Hist Ancient/ Mediev: AH1	3
ART 1112	Art Hist Renaiss/1900: AH1	3
ART 1113	Art Hist 1900 to Present:AH1	3
COM 1300	Comm and Popular Culture: AH1	3
DAN 1050	Dance History: AH1	3
DAN 1025	Dance Appreciation: AH1	3
ENG 2021	Creative Writing I: AH1	3
MUS 1020	Music Appreciation: AH1	3
MUS 1021	Music Hist Mdlv-Classical: AH1	3
MUS 1022	Music Hist Romantic-Prsnt: AH1	3
MUS 1023	Survey of World Music: AH1	3
MUS 1025	History of Jazz: AH1	3
THE 1005	Theatre Appreciation: AH1	3
THE 1008	Theatre Script Analysis: AH1	3
THE 2011	Development of Theatre Greek-Renaissance: GT-AH1	3
THE 2012	Dev of Theatre Restor-Mod: AH1	3
THE 2015	Playwriting: AH1	3

GT-AH2 (Literature and Humanities)

HUM 1003	Intro to Film Art: AH2	3
HUM 1015	World Mythology: AH2	3
HUM 1021	Humanities: Early Civ: AH2	3
HUM 1022	Humanities: Mediev-Mod: AH2	3
HUM 1023	Humanities: Modern Wrld: AH2	3
LIT 1015	Intro to Literature I: AH2	3
LIT 2001	World Lit to 1600: AH2	3
LIT 2002	World Lit After 1600: AH2	3
LIT 2005	Race, Ethnicity, Culture: AH2	3
LIT 2011	Amer Lit to Civil War: AH2	3
LIT 2012	Amer Lit Aft Civil War: AH2	3
LIT 2021	British Lit to 1770: GT-AH2	3
LIT 2022	British Lit Since 1770: GT-AH2	3
LIT 2025	Intro to Shakespeare: AH2	3
LIT 2046	Literature of Women: AH2	3
LIT 2068	Celtic Literature: AH2	3

GT-AH3 (Ways of Thinking)

FRE 2011	French Language III: AH4	3
FRE 2012	French Language IV: AH4	3
GER 2011	German Language III : AH4	3
ITA 2011	Italian Language III: GT-AH4	3
ITA 2012	Italian Language IV: GT-AH4	3
JPN 2011	Japanese Language III : AH4	3
JPN 2012	Japanese Language IV: AH4	3
RUS 2011	Russian Language III: GT-AH4	3
RUS 2012	Russian Language IV: GT-AH4	3
SPA 2011	Spanish Language III: AH4	3
SPA 2012	Spanish Language IV: AH4	3

GT-AH4 (Foreign Languages (must be Intermediate/2000 level))

FRE 2011	French Language III: AH4	3
FRE 2012	French Language IV: AH4	3
GER 2011	German Language III : AH4	3
GER 2012	German Lang 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 : AH4	3
JPN 2012	Japanese Language IV: AH4	3
RUS 2011	Russian Language III: GT-AH4	3
RUS 2012	Russian Language IV: GT-AH4	3
SPA 2011	Spanish Language III: AH4	3
SPA 2012	Spanish Language IV: AH4	3

Communication GT Courses

GT-CO1 (Introductory Writing Course)

ENG 1021	English Composition I: CO1	3
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ENG 1031	Technical Writing I: CO1	3
GT-CO2 (Intermediate Writing Course)		
ENG 1022	English Composition II: CO2	3

History GT Courses

GT-HI1 (History)

HIS 1310	Western Civ:Antiquity-1650: HI1	3
HIS 1320	Western Civ: 1650-Present: HI1	3
HIS 1110	The World: Antiquity-1500: HI1	3
HIS 1120	The World: 1500-Present: HI1	3
HIS 1210	US History to Reconst: HI1	3
HIS 1220	US History since Civil War:HI1	3
HIS 2005	Women in World History: HI1	3
HIS 2125	American Environment Hist: GT-HI1	3
HIS 2115	American Indian History: HI1	3
HIS 2105	Women in U.S. History: HI1	3
HIS 2135	Colorado History: HI1	3
HIS 2130	Hist of American West:HI1	3
HIS 2145	US History Since 1945: HI1	3
HIS 2610	Hist of Modern China: GT-HI1	3
HIS 2200	History of Latin America: HI1	3
HIS 2015	20th Century World History:HI1	3
HIS 2500	History-Islamic Civilization: GT-HI1	3
HIS 2310	Hist Christianity in World: GT-HI1	3
HIS 2120	US Foreign Relations History: GT-HI1	3

Mathematics GT Courses

GT-MA1 (Mathematics)

MAT 1220	Integrated Math I: MA1	3
MAT 1230	Integrated Math II: MA1	3
MAT 1240	Math for Liberal Arts: MA1	4
(Does not meet the Mathematics GT Core requirement for an AS degree.)		
MAT 1260	Intro to Statistics: MA1	3
(Does not meet the Mathematics GT Core requirement for an AS degree.)		
MAT 1320	Finite Mathematics: MA1	4
(Does not meet the Mathematics GT Core requirement for an AS degree.)		
MAT 1340	College Algebra: MA1	4
MAT 1400	Survey of Calculus: MA1	4
(Does not meet the Mathematics GT Core requirement for an AS degree.)		
MAT 1420	College Trigonometry: MA1	3
MAT 1440	Pre-Calculus: MA1	5
MAT 2410	Calculus I: GT-MA1	5
MAT 2420	Calculus II: GT-MA1	5
MAT 2431	Calculus III/Engineer App: GT-MA1	5
MAT 2561	Differential Equations with Engineering Applications: GT-MA1	4

Natural and Physical Sciences GT Courses

GT-SC1 (Course with Required Laboratory)

ANT 1005	Bio Anthropology W/Lab: SC1	4
AST 1110	Planetary Astronomy w/Lab: SC1	4
AST 1120	Stellar Astronomy w/Lab: SC1	4
BIO 1005	Science of Biology w/Lab: SC1	4
BIO 1111	Gen College Biology I/Lab: SC1	5
BIO 1112	Gen College Biology II/Lab:SC1	5
BIO 2101	Human Anatomy & Phys I w/Lab: SC1	4
BIO 2102	Human Anatomy & Phys II w/Lab: SC1	4
BIO 2104	Microbiology w/Lab: SC1	4
BIO 2120	General Zoology w/Lab: SC1	5
BIO 2121	Botany w/Lab: SC1	5
BIO 2124	Genetics: SC1	4
CHE 1011	Intro to Chemistry I/Lab: SC1	5
CHE 1111	Gen College Chem I/Lab: SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5
ENV 1111	Environmental Sci w/Lab: SC1	4
GEO 1011	Phys Geo: Lndfrms w/Lab: SC1	4
GEO 1012	Phys Geo:Clim & Eco w/Lab: SC1	4
GEY 1111	Physical Geology w/Lab: SC1	4

GEY 1112	Historical Geology w/Lab: SC1	4
GEY 1135	Environmental Geol w/Lab: SC1	4
GEY 1155	General Oceanography w/Lab:SC1	4
MET 1050	Gen Meteorology w/Lab: SC1	4
PHY 1105	Conceptual Physics w/Lab: SC1	4
PHY 1107	Energy Sci & Tec w/Lab: SC1	4
PHY 1111	Physics Alg-Based I/Lab: SC1	5
PHY 1112	Physics Alg-Based II/Lab: SC1	5
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
SCI 1055	Integrated Sci I w/Lab: SC1	4
SCI 1056	Integrated Sci II w/Lab: SC1	4
(Students MUST successfully pass BOTH SCI 1055 & SCI 1056 to satisfy the GT Pathways science requirement. Recommended for Teacher Education only.)		

GT-SC2 (Course Without Required Laboratory)

AST 1150	Astrobiology: SC2	3
AST 1140	Astronomy Ancient Cultures: SC2	3
AST 1160	Cosmology: SC2	3
BIO 1016	Intro to Human Disease: SC2	3
ENV 1010	Natural Disasters: SC2	3
GEY 1108	Geology of National Parks: SC2	3
SCI 1105	Science in Society: SC2	3

Social and Behavioral Sciences GT Courses

GT-SS1 (Economic or Political Systems)

ECO 1001	Econ Of Social Issues:SS1	3
ECO 2001	Prin of Macroeconomics: SS1	3
ECO 2002	Prin of Microeconomics: SS1	3
ECO 2045	Environmental Economics:SS1	3
POS 2020	Intro to Political Science: SS1	3
POS 1011	American Government: SS1	3
POS 1025	Amer State and Local Govt: SS1	3
POS 2005	International Relations: SS1	3
POS 1050	Current Polit Issues: SS1	3
POS 2025	Comparative Government: SS1	3

GT-SS2 (Geography)

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

GT-SS3 (Human Behavior Culture and Social Frameworks)

AGR 2106	World Population and Food: SS3	3
ANT 1001	Cultural Anthropology: SS3	3
ANT 1003	Intro to Archaeology: SS3	3
ANT 1208	Arch. of World Rock Art: SS3	3
ANT 2115	Native Peoples N. America: SS3	3
ANT 2125	Anth of Religion: SS3	3
ANT 2550	Medical Anthropology:SS3	3
COM 1250	Interpersonal Comm: SS3	3
COM 2220	Group Communication: SS3	3
COM 2300	Intercultural Comm: SS3	3
CRJ 1010	Intro to Criminal Justice: SS3	3
JOU 1005	Introduction to Mass Media: SS3	3
PSY 1001	General Psychology I: SS3	3
PSY 1002	General Psychology II : SS3	3
PSY 2105	Psychology of Gender: SS3	3
PSY 2107	Human Sexuality: SS3	3
PSY 2221	Social Psychology: SS3	3
PSY 2222	Psychology of Death/Dying: SS3	3
PSY 2331	Positive Psychology: SS3	3
PSY 2440	Human Growth & Developmnt: SS3	3
PSY 2441	Child Development: SS3	3
PSY 2333	Health Psychology: SS3	3
PSY 2552	Abnormal Psychology: SS3	3
PSY 2771	Psychology of Personality: SS3	3
SOC 1001	Intro to Sociology I : SS3	3
SOC 1002	Intro to Sociology II: SS3	3
SOC 2005	Soc Of Family Dynamics:SS3	3
SOC 2007	Environmental Sociology:SS3	3
SOC 2015	Contemp. Social Problems: SS3	3
SOC 2016	Sociology Of Gender: SS3	3
SOC 2018	Sociology of Diversity: SS3	3
SOC 2020	Sociology of Religion: SS3	3
SOC 2031	Sociology-Deviant Behavior:SS3	3
SOC 2037	Sociology Of Death&Dying: SS3	3

WST 2000

Intro Women's Studies: SS3

3

Academic Programs and Areas of Study

The college reserves the right to substitute or delete courses in a degree or certificate program. Consult with a faculty advisor before beginning any program or area of study.

Guided Pathways

Red Rocks Community College has moved to a Guided Pathways model that focuses on access to completion. This model focuses on laying out a clear cohesive path for students' academic or career program and aligning the support services or resources to assist students within their chosen path to successful on-time completion or graduation.

There are eight Guided Pathways for students to choose from:

Business

Computer Information Technology
Creative & Performing Arts
Health Sciences
Humanities, Social Science, & Education
Manufacturing & Technical Trades
Outdoor Leadership & Emergency Services
Science, Technology, Engineering, & Math (STEM)

For more information regarding Guided Pathways, please contact the Advising department on campus at (303) 914-6275 or advising@rrcc.edu

Academic Programs and Areas of Study

Accounting

www.rrcc.edu/business

If you plan to transfer to a four-year college or university to complete a major in Accounting, you should consider the AA degree with a business emphasis. Consult with an Accounting faculty advisor early in your college career to explore all your educational options. You must earn a C or higher in all accounting courses to graduate with a degree or certificate in accounting.

Certificates

Accounting Fundamentals (p. 79)
Bookkeeping Clerk (p. 79)
Individual Tax Preparer (p. 79)
Accounting Clerk (p. 79)
Individual Tax Paraprofessional (p. 80)

Degrees: Associate of Applied Science

Accounting Paraprofessional (p. 80)
Accounting Technician (p. 80)

Stackable Certificates & Degrees

Bookkeeping Clerk Stackable Certificate (p. 81)
Accounting Clerk Stackable Certificate (p. 81)
Individual Tax Paraprofessional Stackable Certificate (p. 81)
Accounting Paraprofessional Stackable AAS Degree (p. 81)
Accounting Technician Stackable AAS Degree (p. 81)

Accounting Certificates

Accounting Fundamentals Certificate

Certificate Requirements

This certificate provides you with the basic accounting concepts of business. The certificate can be used as a stand-alone, to gain general knowledge, or as a stepping-stone to another Accounting or Business certificate or degree.

Required Courses

ACC 1021	Accounting Principles I	4
ACC 1022	Accounting Principles II	4
		TOTAL CREDIT HOURS: 8

Bookkeeping Clerk Certificate

Certificate Requirements

Completing this program prepares you to perform entry-level bookkeeping and accounting tasks.

Required Courses

ACC 1021	Accounting Principles I	4
ACC 1038	Payroll and Sales Tax	3
or		
ACC 1015	Payroll Accounting	3
BUS 1015	Introduction to Business	3
CIS 1018	Intro PC Applications	3
		Subtotal: 13

Faculty advisor-approved business electives

Recommended: ACC, BUS, MAN, MAR, SBM

Subtotal: 3

TOTAL CREDIT HOURS: 16

Individual Tax Preparer Certificate

Certificate Requirements

Completing this certificate provides the skills necessary to prepare basic individual tax returns. Successful completion includes earning the VITA/TCE certificate through the IRS.

Required Courses

ACC 1032	Tax Help Colorado	2
ACC 1033	Tax Help Colorado Practicum	1
		TOTAL CREDIT HOURS: 3

Accounting Clerk Certificate

Certificate Requirements

Completing this program prepares you to perform a variety of functions in an accounting system. Examples include bookkeeper, inventory clerk, payroll clerk, accounts payable clerk, accounts receivable clerk, and fixed-assets clerk.

Required Courses

ACC 1021	Accounting Principles I	4
ACC 1022	Accounting Principles II	4
ACC 1032	Tax Help Colorado	2
or		
faculty advisor-approved business elective*		
ACC 1035	Spreadsheet Applications for Accounting	3
ACC 1038	Payroll and Sales Tax	3
or		
ACC 1015	Payroll Accounting	3
ACC 2045	Computerized Acct Prof Pkg	3
or		
ACC 1025	Computerized Accounting	3
BUS 1015	Introduction to Business	3
BUS 1016	Personal Finance	3
or		
faculty advisor-approved business elective*		
CIS 1018	Intro PC Applications	3
		TOTAL CREDIT HOURS: 28

Individual Tax Paraprofessional Certificate

Certificate Requirements

Completing this certificate provides the foundation necessary to prepare individual tax returns.

Required Courses

ACC 1021	Accounting Principles I	4
ACC 1022	Accounting Principles II	4
ACC 1031	Income Tax	3
ACC 1032	Tax Help Colorado	2
ACC 1033	Tax Help Colorado Practicum	1
ACC 1035	Spreadsheet Applications for Accounting	3
ACC 1038	Payroll and Sales Tax	3
	or	
ACC 1015	Payroll Accounting	3

TOTAL CREDIT HOURS: 20

Accounting Degrees

Accounting Paraprofessional AAS Degree

Degree Requirements

This program prepares you to work as an accounting paraprofessional or accounting assistant.

Required Courses

ACC 1021	Accounting Principles I	4
ACC 1022	Accounting Principles II	4
ACC 1032	Tax Help Colorado	2
	or	
	faculty advisor-approved business elective*	
ACC 1033	Tax Help Colorado Practicum	1
	or	
	faculty advisor-approved business elective*	
ACC 1035	Spreadsheet Applications for Accounting	3
ACC 1038	Payroll and Sales Tax	3
	or	
ACC 1015	Payroll Accounting	3
ACC 2011	Intermediate Accounting I	4
ACC 2012	Intermediate Accounting II	4
ACC 2045	Computerized Acct Prof Pkg	3
	or	
ACC 1025	Computerized Accounting	3
BUS 1015	Introduction to Business	3
BUS 1016	Personal Finance	3
	or	
	faculty advisor-approved business elective*	
BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications	3
ECO 2001	Prin of Macroeconomics: SS1	3
	or	
ECO 2002	Prin of Microeconomics: SS1	3

Subtotal: 43

Faculty advisor-approved business electives

*Recommended: ACC, BUS, MAN, MAR, SBM

Subtotal: 1

General Education Courses (15 credits)

Required Courses

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4

Choose from TWO of the following three areas (6 credits):

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (1000 and above)

ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

AND

Choose an additional 3 credits from any of the above prefixes

Subtotal: 15

TOTAL CREDIT HOURS: 60

Accounting Technician AAS Degree

This program prepares you to perform bookkeeping and various support positions for accounting departments.

Degree Requirements

Required Courses

ACC 1021	Accounting Principles I	4
ACC 1022	Accounting Principles II	4
ACC 1031	Income Tax	3
ACC 1032	Tax Help Colorado	2
	or	
	faculty advisor-approved business elective*	
ACC 1033	Tax Help Colorado Practicum	1
	or	
	faculty advisor-approved business elective*	
ACC 1035	Spreadsheet Applications for Accounting	3
ACC 1038	Payroll and Sales Tax	3
	or	
ACC 1015	Payroll Accounting	3
ACC 2045	Computerized Acct Prof Pkg	3
	or	
ACC 1025	Computerized Accounting	3
BUS 1015	Introduction to Business	3
BUS 1016	Personal Finance	3
	or	
	faculty advisor-approved business elective*	
BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications	3
CIS 1018	Intro PC Applications	3
ECO 2001	Prin of Macroeconomics: SS1	3
	or	
ECO 2002	Prin of Microeconomics: SS1	3

Subtotal: 41

Recommended faculty advisor-approved business

electives:

* ACC, BUS, MAN, MAR, SBM

Subtotal: 3

General Education Requirements (15 credits)

Required Courses:

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4

Choose from TWO of the following three areas (6 credits)

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (1000 and above)

ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

AND

Choose an additional 3 credits from any of the above prefixes

Subtotal: 15

TOTAL CREDIT HOURS: 60

Accounting Certificates (Stackable)

Consult with an Accounting faculty advisor for information on stackable certificates and degrees.

Bookkeeping Clerk Stackable Certificate

Certificate Requirements

Accounting Fundamentals Certificate (p. 79)

Required Courses

ACC 1038	Payroll and Sales Tax	3
	or	
ACC 1015	Payroll Accounting	3
BUS 1015	Introduction to Business	3
CIS 1018	Intro PC Applications	3

Accounting Clerk Stackable Certificate

Certificate Requirements

Individual Tax Preparer Certificate (p. 79)

Bookkeeping Clerk Certificate (p. 79)

Required Courses

ACC 1035	Spreadsheet Applications for Accounting	3
	or	
CIS 1055	Complete Spreadsheets	3
ACC 2045	Computerized Acct Prof Pkg	3
	or	
ACC 1025	Computerized Accounting	3
BUS 1016	Personal Finance	3
	or faculty advisor-approved business elective*	

Individual Tax Paraprofessional Stackable Certificate

Certificate Requirements

Accounting Clerk Certificate (p. 79)

Required Courses

ACC 1031	Income Tax	3
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Accounting Degrees (Stackable)

Consult with an Accounting faculty advisor for information on stackable certificates and degrees.

Accounting Paraprofessional Stackable AAS Degree

Degree Requirements

Individual Tax Preparer Certificate (p. 79)

Accounting Clerk Certificate (p. 79)

Required Courses

ACC 2011	Intermediate Accounting I	4
ACC 2012	Intermediate Accounting II	4

BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications	3
ECO 2001	Prin of Macroeconomics: SS1	3
	or	
ECO 2002	Prin of Microeconomics: SS1	3
Elective	One Elective Course (see BUS program advisor)	1

Subtotal: 18

Subtotal: 60

General Education Requirements (15 credits)

Required Courses

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4
	or any higher MAT course	

Choose from TWO of the following three areas (6 credits):

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (1000 and above)

ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

AND

Choose an additional 3 credits from any of the above prefixes

Subtotal: 15

Accounting Technician Stackable AAS Degree

Degree Requirements

Accounting Clerk Certificate (p. 79)

Individual Tax Paraprofessional Certificate (p. 80)

Required Courses

BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications	3
CIS 1018	Intro PC Applications	3
ECO 2001	Prin of Macroeconomics: SS1	3
	or	
ECO 2002	Prin of Microeconomics: SS1	3
	and	
	Faculty advisor-approved business elective*	1

Subtotal: 17

General Education Requirements (15 credits)

Required Courses

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4

Choose from TWO of the following three areas (6 credits)

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (1000 and above)

ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

AND

Choose an additional 3 credits from any of the above prefixes

Subtotal: 15
TOTAL CREDIT HOURS: 60

HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1
		Subtotal: 11

Air Conditioning, Heating, and Refrigeration

www.rccc.edu/hvac

This program provides the knowledge and skills for entry into the air conditioning, heating, and refrigeration industry in the areas of installation and maintenance, as well as upgrading and refresher courses for those already employed in the field. All heating, air conditioning, and refrigeration classes will be updated to reflect today's changing energy efficiency requirements. LEED requirements will be incorporated into all curriculum and additional classes will be offered to support the new energy efficiency needs. Students should call 303-914-6306 for advising.

Related course work may be found under: Carpentry, Electricity, Mechanical Trades, and Plumbing.

Certificates

- Air Conditioning-AHRA (p. 82)
- Refrigeration-AHRR (p. 82)
- Refrigeration Level I-AHRR (p. 82)
- Refrigeration Level II-CTHO (p. 82)
- HVAC Fundamentals-AHRF (p. 82)
- HVAC Control Technician-CTHM (p. 83)
- Forced-Air Heating-AHRHH (p. 83)
- Hydronic Heating-AHRHH (p. 83)

Degrees: Associate of Applied Science

Air Conditioning, Heating, and Refrigeration-AHR (p. 83)

Air Conditioning, Heating, and Refrigeration Certificates

Air Conditioning-AHRA Certificate

Certificate Requirements

Level I Refrigeration Certificate:

HVA 1002	Basic Refrigeration	4
HVA 1005	Electricity for HVAC/R	4
HVA 1013	Refrigerant Recovery Training	1
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1
		Subtotal: 11

Required Courses

HVA 1011	Piping Skills for HVAC	4
HVA 1032	Air Cond & Refrig Controls	4
HVA 1034	Air Conditioning Systems	4
HVA 1040	Basic Sheet Metal	4
HVA 1041	Sheet Metal Fabrication	2
HVA 2006	Mechanical Codes	4
HVA 2061	A/C Systems Service and Repair	4
		Subtotal: 26
		TOTAL CREDIT HOURS: 37

Refrigeration-AHRR Certificate

Certificate Requirements

Level I Refrigeration Certificate

HVA 1002	Basic Refrigeration	4
HVA 1005	Electricity for HVAC/R	4
HVA 1013	Refrigerant Recovery Training	1

Required Courses

HVA 1011	Piping Skills for HVAC	4
HVA 1032	Air Cond & Refrig Controls	4
HVA 2006	Mechanical Codes	4
HVA 2033	Advanced Refrigeration	4
		Subtotal: 16

Electives

HVA	HVA Elective (4)	4
		Subtotal: 4

TOTAL CREDIT HOURS: 31

Refrigeration Level I-AHRR Certificate

Certificate Requirements

Required Courses

HVA 1002	Basic Refrigeration	4
HVA 1005	Electricity for HVAC/R	4
HVA 1013	Refrigerant Recovery Training	1
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1
		TOTAL CREDIT HOURS: 11

Refrigeration Level II-CTHO Certificate

Certificate Requirements

Level I Refrigeration Certificate:

HVA 1002	Basic Refrigeration	4
HVA 1005	Electricity for HVAC/R	4
HVA 1013	Refrigerant Recovery Training	1
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1
		Subtotal: 11

Required Courses

HVA 1011	Piping Skills for HVAC	4
HVA 1032	Air Cond & Refrig Controls	4
		Subtotal: 8

Electives

Choose one of the following:

HVA 2033	Advanced Refrigeration	4
HVA 2061	A/C Systems Service and Repair	4
		Subtotal: 4

TOTAL CREDIT HOURS: 23

HVAC Fundamentals-AHRF Certificate

Certificate Requirements

Required Courses

HVA 1002	Basic Refrigeration	4
HVA 1005	Electricity for HVAC/R	4
HVA 1010	Fundamentals of Gas Heating	4
HVA 1013	Refrigerant Recovery Training	1
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1
		TOTAL CREDIT HOURS: 15

HVAC Control Technician-CTHM Certificate

Certificate Requirements

Required Courses

HVA 1005	Electricity for HVAC/R	4
HVA 1032	Air Cond & Refrig Controls	4
HVA 1062	Heating Controls	4
HVA 2031	Pneumatic Controls	4
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1

TOTAL CREDIT HOURS: 18

Forced-Air Heating-AHRFH Certificate

Certificate Requirements

Required Courses

HVA 1005	Electricity for HVAC/R	4
HVA 1010	Fundamentals of Gas Heating	4
HVA 1011	Piping Skills for HVAC	4
HVA 1040	Basic Sheet Metal	4
HVA 1062	Heating Controls	4
HVA 2006	Mechanical Codes	4
HVA 2040	Servicing Forced Air Systems	4
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1

TOTAL CREDIT HOURS: 30

Hydronic Heating-AHRHH Certificate

Certificate Requirements

Required Courses

HVA 1005	Electricity for HVAC/R	4
HVA 1010	Fundamentals of Gas Heating	4
HVA 1011	Piping Skills for HVAC	4
HVA 1062	Heating Controls	4
HVA 2047	Hot Water Heating Systems	4
HVA 2067	Radiant Heating Systems	4
HVA 2068	Advanced Hydronic Controls	4
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1

TOTAL CREDIT HOURS: 30

Air Conditioning, Heating, and Refrigeration Degrees

Air Conditioning, Heating, and Refrigeration-AHR AAS Degree

Degree Requirements

Refrigeration Level I Certificate:

HVA 1002	Basic Refrigeration	4
HVA 1005	Electricity for HVAC/R	4
HVA 1013	Refrigerant Recovery Training	1
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1

Subtotal: 11

Required Courses

HVA 1010	Fundamentals of Gas Heating	4
HVA 1011	Piping Skills for HVAC	4
HVA 1032	Air Cond & Refrig Controls	4
HVA 1034	Air Conditioning Systems	4
HVA 1040	Basic Sheet Metal	4
HVA 1062	Heating Controls	4

HVA 2006	Mechanical Codes	4
HVA 2040	Servicing Forced Air Systems	4
HVA 2047	Hot Water Heating Systems	4

Subtotal: 36

General Education Courses

See **AAS Degree Requirements** (p. 55)

Subtotal: 15

TOTAL CREDIT HOURS: 62

Anthropology

www.rccc.edu/anthropology

Degree: Associate of Arts

Anthropology AA Degree With Designation (p. 56)

Anthropology AA Degree With Designation

The completion of the following courses is appropriate for students who plan to transfer to a state four-year college or university to complete a major in Anthropology. This program provides preparation in the three main fields of anthropology if you are interested in teaching, research, museums, or applied positions. Consult with a faculty advisor if planning this program of study.

Anthropology AA Degree With Designation (p. 56)

Applied Technology

This program is the approval for a statewide articulation agreement that allows Area Technical Colleges (AVS) graduates to transfer up to 45 credits to the community college toward the completion of an AAS degree in Applied Technology. Program requires the completion of an additional 15-18 general education courses at the community college.

Students desiring to complete the AAS degree in Applied Technology may complete the technical coursework contained in a state-approved certificate career and technical education program at one of the four area vocational technical schools (AVTS). The four AVTS are Delta-Montrose Area Vocational Technical Center, Emily Griffith Opportunity School, San Juan Basin Technical College, and Pickens Tech Center.

Degree: Associate of Applied Science

Applied Technology (p. 83)

Applied Technology AAS Degree

Required General Education Courses

Communication

ENG 1021	English Composition I: CO1 or higher	3
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Subtotal: 3

Mathematics

MAT 1140	Career Math or higher	3
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Subtotal: 3

Choose from TWO of the following three areas (6 credits)

Arts and Humanities (100 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (100 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (100 and above)

ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

Subtotal: 6

Choose an additional 3 credits from any of the above prefixes

Subtotal: 3
Subtotal: 15

Elective Courses**Electives**

Transfer of up to 45 credits from Area Technical College coursework completed with a C or higher grade. If student has earned less than minimum 45 CTE credits, elective courses at the community college will be required to reach the necessary credits for completion of the degree.

Subtotal: 45
TOTAL CREDIT HOURS: 60

Art

www.rccc.edu/visual-arts

Degrees: Associate of Arts

Studio Art AA Degree With Designation (p. 72)
Art History AA Degree With Designation (p. 57)

Art History AA Degree With Designation

The completion of the Studio Art AA Designated Degree is appropriate for students who plan to transfer to a state four-year college or university to complete a major in Studio Art. Consult with a faculty advisor if planning this program of study.

Art History AA Designated Degree Requirements (p. 57)

Studio Art AA Degree With Designation

The completion of the Studio Art AA Designated Degree is appropriate for students who plan to transfer to a state four-year college or university to complete a major in Studio Art. Consult with a faculty advisor if planning this program of study.

Studio Art AA Designated Degree Requirements (p. 72)

Auto Collision Repair

www.rccc.edu/warrentech/auto-service-collision-customization

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRCC students pursuing certain career and technical college degrees/certificates may take courses (on a space-available basis) at Warren Tech (WT), which is adjacent to the RRCC campus. You must have graduated from high school, received a GED, or attained the age of 21. You pay RRCC tuition and WT program fees and your coursework is recorded on your RRCC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start and end dates differ from those of RRCC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m. For more information, see Warren Tech Students (p. 16) under Student Types.

This is a Nationally Certified Auto Collision Repair program that uses the I-CAR live curriculum with the primary purpose of preparing you for careers in the auto collision repair industry. You can also achieve the necessary credits to obtain an associate degree. A minimum of 45 ACT credits and 15 general education credits are required for the AAS degree. Some courses may transfer to a bachelor's degree in automotive management. Students must comply with personal and environmental safety practices in accordance with local, state, and federal safety and environmental regulations. Each certificate is a full one-semester program. An optional Advanced Semester is available.

Certificates

Automotive Collision Industry Introduction (p. 84)

Beginning Auto Collision Non-Structure Repair and Refinish (p. 84)
Intermediate Auto Collision Non-Structure Repair and Refinish (p. 84)
Advanced Auto Collision Structure Repair and Refinish (p. 84)
Industry Prepared Structure, Repair and Refinish (p. 85)

Degree: Associate of Applied Science

Auto Collision Technology (p. 85)

Auto Collision Repair Certificates**Automotive Collision Industry Introduction Certificate****Certificate Requirements****Required Courses**

ACT 1001	Intro to Auto Collision Tech	4
ACT 1010	Safety in Collision Repair	2
ACT 1021	Non-Structural Repair Prep	3
ACT 1041	Refinishing Safety	1
ACT 1042	Surface Preparation I	2

TOTAL CREDIT HOURS: 12

Beginning Auto Collision Non-Structure Repair and Refinish Certificate**Certificate Requirements****Required Courses**

ACT 1011	Metal Welding and Cutting I	3
ACT 1022	Panel Repair and Replacements	3
ACT 1023	Metal Finishing & Body Filling	3
ACT 1043	Spray Equipment Operation	2
ACT 1044	Refinishing I	2
ACT 2044	Final Detail	2

TOTAL CREDIT HOURS: 15

Intermediate Auto Collision Non-Structure Repair and Refinish Certificate**Certificate Requirements****Required Courses**

ACT 1024	Replace Weld-on Exterior Panel	3
ACT 1070	Auto Collision Tech Lab Exp I	3
ACT 2005	Estimating and Shop Management	3
ACT 2041	Paint Defects	3
ACT 2042	Surface Preparation II	2
ACT 2043	Refinishing II	2

TOTAL CREDIT HOURS: 16

Advanced Auto Collision Structure Repair and Refinish Certificate**Certificate Requirements****Required Courses**

ACT 1031	Structural Damage Diagnosis	3
ACT 1032	Structural Damage Repair	3
ACT 1051	Plastics & Adhesives I	1
ACT 1071	Auto Collision Tech Lab II	1-9

ACT 2011	ACT1071 is 3 credits for this certificate Metal Welding and Cutting II	2
TOTAL CREDIT HOURS: 12		

Industry Prepared Structure, Repair and Refinish Certificate

Certificate Requirements

(3rd year/5th semester option for Warren Tech.)

Required Courses

ACT 1072	Auto Collision Tech Lab III	3
ACT 1080	Auto Collision Repr Internsp I ACT1080 is 2 credits for this certificate	1-9
ACT 2020	Structural Repair II	4
ACT 2026	Production	4
ACT 2031	Adv Struct Damage Diag/Repair	3
ACT 2032	Automotive Glass Repair	2
TOTAL CREDIT HOURS: 18		

Auto Collision Repair Degrees

Auto Collision Technology AAS Degree

Degree Requirements

Required Courses

A minimum of 55 credits from the following courses:

ACT 1001	Intro to Auto Collision Tech	4
ACT 1010	Safety in Collision Repair	2
ACT 1011	Metal Welding and Cutting I	3
ACT 1021	Non-Structural Repair Prep	3
ACT 1022	Panel Repair and Replacements	3
ACT 1023	Metal Finishing & Body Filling	3
ACT 1024	Replace Weld-on Exterior Panel	3
ACT 1031	Structural Damage Diagnosis	3
ACT 1032	Structural Damage Repair	3
ACT 1041	Refinishing Safety	1
ACT 1042	Surface Preparation I	2
ACT 1043	Spray Equipment Operation	2
ACT 1044	Refinishing I	2
ACT 1051	Plastics & Adhesives I	1
ACT 1070	Auto Collision Tech Lab Exp I	3
ACT 1071	Auto Collision Tech Lab II	1-9
ACT 2005	Estimating and Shop Management	3
ACT 2011	Metal Welding and Cutting II	2
ACT 2041	Paint Defects	3
ACT 2042	Surface Preparation II	2
ACT 2043	Refinishing II	2
ACT 2044	Final Detail	2
Subtotal: 55		

General Education Courses

See AAS Degree Requirements (p. 55)

Subtotal: 15

TOTAL CREDIT HOURS: 70

Automotive Customization

www.rrcc.edu/warrentech/auto-service-collision-customization

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRCC students pursuing certain career and technical college degrees/certificates may take courses (on a space-available basis) at Warren Tech (WT), which is adjacent to the RRCC campus. You must have graduated from high school, received a GED, or attained the age of 21. You pay RRCC tuition and WT program fees and your coursework is recorded on your RRCC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start and end dates differ from those of RRCC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m. For more information, see Warren Tech Students on page 12.

This program is designed to give you basic and advanced skill training needed for successful entry into the automotive customizing and refinishing industry through theory and lab experiences. Each certificate is a full one-semester program.

Certificates

Automotive Customizing Industry Introduction (p. 85)
Introduction to High-Performance Vehicles (p. 85)
Introduction to Custom Painting (p. 85)
Auto Customization and Performance (p. 86)
Advanced Auto Customization and Performance (p. 86)

Degree: Associate of Applied Science

Automotive Customization (p. 86)

Automotive Customization Certificates

Automotive Customizing Industry Introduction Certificate

Certificate Requirements

Required Courses

ACT 1001	Intro to Auto Collision Tech	4
ACT 1010	Safety in Collision Repair	2
ACT 1041	Refinishing Safety	1
ACT 1042	Surface Preparation I	2
ACT 1065	Automotive Body Customizing I	3
TOTAL CREDIT HOURS: 12		

Introduction to High-Performance Vehicles Certificate

Certificate Requirements

Required Courses

ACT 1060	Custom Painting	3
ACT 1070	Auto Collision Tech Lab Exp I	3
ACT 2005	Estimating and Shop Management	3
ASE 1002	Intro to the Automotive Shop	2
AUT 1009	Hi Perform Suspsn/Chassis Dsn	2
AUT 1016	High Performance Brake Systems	2
TOTAL CREDIT HOURS: 15		

Introduction to Custom Painting Certificate

Certificate Requirements

Required Courses

ACT 1011	Metal Welding and Cutting I	3
ACT 1022	Panel Repair and Replacements	3
ACT 1023	Metal Finishing & Body Filling	3
ACT 1043	Spray Equipment Operation	2
ACT 1044	Refinishing I	2
ACT 1066	Automotive Body Customizing II	3
TOTAL CREDIT HOURS: 16		

Auto Customization and Performance Certificate

Certificate Requirements

Required Courses

ACT 1067	Automotive Body Customizing III	3
ACT 1071	Auto Collision Tech Lab II	1-9
	ACT1071 is 1 credit for this certificate	
ACT 2011	Metal Welding and Cutting II	2
ACT 2043	Refinishing II	2
ASE 1020	Basic Auto Electricity	2
ASE 1030	General Engine Diagnosis	2
AUT 1036	Intro to Racecar Body Fab	2

TOTAL CREDIT HOURS: 14

Advanced Auto Customization and Performance Certificate

Certificate Requirements

(3rd year/5th semester option for Warren Tech.)

Required Courses

ACT 1061	Automotive Graphics & Designs	3
ACT 1062	Auto Air Brushing & Murals	3
ACT 1063	Auto Special Effects/Refinish	3
ACT 1072	Auto Collision Tech Lab III	3
AUT 1010	Hi Perfo Suspsn/Chassis Setup	4
AUT 1025	Engines I	4
AUT 1037	Intro to Racecar Chassis Fab	2

TOTAL CREDIT HOURS: 22

Automotive Customization Degrees

Automotive Customization AAS Degree

Degree Requirements

Required Courses

A minimum of 57 credits must be taken from the following courses:

ACT 1001	Intro to Auto Collision Tech	4
ACT 1010	Safety in Collision Repair	2
ACT 1011	Metal Welding and Cutting I	3
ACT 1022	Panel Repair and Replacements	3
ACT 1023	Metal Finishing & Body Filling	3
ACT 1041	Refinishing Safety	1
ACT 1042	Surface Preparation I	2
ACT 1043	Spray Equipment Operation	2
ACT 1044	Refinishing I	2
ACT 1060	Custom Painting	3
ACT 1065	Automotive Body Customizing I	3
ACT 1066	Automotive Body Customizing II	3
ACT 1067	Automotive Body Customizing III	3
ACT 1070	Auto Collision Tech Lab Exp I	3
ACT 1071	Auto Collision Tech Lab II	1-9
	ACT1071 is 1 credit for this degree	
ACT 2005	Estimating and Shop Management	3
ACT 2011	Metal Welding and Cutting II	2
ACT 2043	Refinishing II	2
AUT 1009	Hi Perform Suspsn/Chassis Dsn	2
AUT 1016	High Performance Brake Systems	2
AUT 1036	Intro to Racecar Body Fab	2
ASE 1002	Intro to the Automotive Shop	2
ASE 1020	Basic Auto Electricity	2
ASE 1030	General Engine Diagnosis	2

Subtotal: 57

General Education Courses

See AAS Degree Requirements (p. 55)

Subtotal: 15

TOTAL CREDIT HOURS: 72

Automotive Service Technology

www.rrcc.edu/warrentech/auto-service-collision-customization

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRCC students pursuing certain career and technical college degrees/certificates may take courses (on a space-available basis) at Warren Tech (WT) which is adjacent to the RRCC campus. You must have either graduated from high school, received a GED, or attained the age of 21. You pay RRCC tuition and WT program fees and your coursework is recorded on your RRCC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start and end dates differ from those of RRCC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m. For more information, see Warren Tech Students on page 12.

This program is a nationally certified automotive repair program (NATEF) which provides you with entry-level skills in the automotive industry or upgrading for those currently in the field. Demonstrated mastery of skills is required and all tasks must be completed to satisfy industry standards. All automotive (ASE) courses are held at the Warren Tech automotive classroom/lab. Each certificate is a full one-year program with an optional third year advanced certificate. The instructors are ASE Certified Master Technicians. Consult with an automotive service technology advisor before beginning your program of study.

Certificates

- Maintenance Light Repair (p. 86)
- Auto Service Technician (p. 86)
- Master Auto Service Technician (p. 87)

Degree: Associate of Applied Science

Automotive Service Technology (p. 87)

Automotive Service Technology NATEF Specialty Area Certificates

Auto Service Technician Certificate

Certificate Requirements

Required Courses

ASE 1011	Auto Brake Service II	2
ASE 1022	Auto Elec Safety Systems	1
ASE 1023	Starting & Charging Systems	2
ASE 1041	Suspension and Steering II	2
ASE 1051	Man Trans/Transaxles/Clutch I	2
ASE 1052	Man Trans/Transax/Clutch II	2
ASE 2051	Auto Trans/Transaxle Repair	3
ASE 2031	Auto Comp & Ignition Sys	2
ASE 2033	Auto Fuel Inject/Emissions II	4

TOTAL CREDIT HOURS: 20

Maintenance Light Repair Certificate

Certificate Requirements

Required Courses

ASE 1001	Auto Shop Orientation	2
ASE 1002	Intro to the Automotive Shop	2
ASE 1010	Auto Brake Service I	2
ASE 1020	Basic Auto Electricity	2
ASE 1030	General Engine Diagnosis	2
ASE 1034	Autofuel & Emissions Syst I	2

ASE 1040	Suspension and Steering I	2
ASE 1050	Man Drive Train & Axle Maint.	2
ASE 2050	Auto Trans/Transaxle Service	1
ASE 2064	Intro to HVAC Systems	1
TOTAL CREDIT HOURS: 18		

Master Auto Service Technician Certificate

Certificate Requirements

Required Courses

ASE 1053	Auto Drive Axle O/H	1
ASE 1054	Manual Trans/Axle Diags & Rpr	1
ASE 1061	Engine Repair & Rebuild	3
ASE 1062	Automotive Engine Service	2
ASE 2010	Auto Pwr/ABS Brake Systems	2
ASE 2021	Auto/Diesel Body Electrical	4
ASE 2035	Driveability & Diagnosis	2
ASE 2040	Suspension and Steering III	2
ASE 2052	Adv Automatic Trans/Transax	2
ASE 2065	HVAC Systems	4
TOTAL CREDIT HOURS: 23		

Automotive Service Technology Degrees

Automotive Service Technology AAS Degree

Degree Requirements

Required Courses

A minimum of 60 credits must be taken from the following courses

ASE 1001	Auto Shop Orientation	2
ASE 1002	Intro to the Automotive Shop	2
ASE 1010	Auto Brake Service I	2
ASE 1011	Auto Brake Service II	2
ASE 2010	Auto Pwr/ABS Brake Systems	2
ASE 1040	Suspension and Steering I	2
ASE 1041	Suspension and Steering II	2
ASE 2040	Suspension and Steering III	2
ASE 2064	Intro to HVAC Systems	1
ASE 2065	HVAC Systems	4
ASE 1050	Man Drive Train & Axle Maint.	2
ASE 1051	Man Trans/Transaxles/Clutch I	2
ASE 1052	Man Trans/Transax/Clutch II	2
ASE 1053	Auto Drive Axle O/H	1
ASE 1054	Manual Trans/Axle Diags & Rpr	1
ASE 2050	Auto Trans/Transaxle Service	1
ASE 2051	Auto Trans/Transaxle Repair	3
ASE 2052	Adv Automatic Trans/Transax	2
ASE 1030	General Engine Diagnosis	2
ASE 1034	Autofuel & Emissions Syst I	2
ASE 2031	Auto Comp & Ignition Sys	2
ASE 2033	Auto Fuel Inject/Emissions II	4
ASE 2035	Driveability & Diagnosis	2
ASE 1020	Basic Auto Electricity	2
ASE 1022	Auto Elec Safety Systems	1
ASE 1023	Starting & Charging Systems	2
ASE 2021	Auto/Diesel Body Electrical	4
ASE 1061	Engine Repair & Rebuild	3
ASE 1062	Automotive Engine Service	2
Subtotal: 61		

General Education Courses

See AAS Degree Requirements (p. 55)

Subtotal: 15

TOTAL CREDIT HOURS: 76

Biology

www.rccc.edu/biology

Degree: Associate of Science

Biology AS Degree With Designation (p. 57)

Biology AS Degree With Designation

If you plan to transfer to a four-year college or university to complete a major in Biology, you should complete the following courses. Consult with a faculty or academic advisor before beginning this program of study. These courses provide the basic preparation leading to political science-related careers.

See Biology AS Degree With Designation Requirements (p. 57)

Business

www.rccc.edu/business

A Business Degree or certificate creates a practical approach to industry with the versatility to span many career interests and options. RRCC offers areas of study that are in high demand in the current economy. Students can specialize in entrepreneurship, international business, leadership, management, marketing, nonprofit, real estate, small business or a technical specialty of the student's choosing. Credits may transfer to a four-year college or university and apply toward a major in a business-related field.

If you plan to transfer to a four-year college or university to complete a major in Business or a business-related field, you should consider the AA degree with a business designation. Consult with a Business faculty advisor early in your college career to explore all your educational options.

Certificates

- Business Foundations (p. 87)
- Small Business/Entrepreneurship (p. 88)
- International Business (p. 88)
- Leadership (p. 88)
- Management (p. 88)
- Marketing (p. 88)
- Nonprofit Management (p. 88)
- Real Estate (p. 88)
- Workforce Readiness (p. 89)

Degrees: Associate of Applied Science

- Business Administration (p. 89)
- Business - Interdisciplinary (p. 89)
- Business - Real Estate (p. 90)

Degree: Associate of Arts

- Business AA Degree With Designation (p. 58)

Business Certificates

Business Foundations Certificate

The courses composing this certificate provide a glimpse of the business environment. Foundational concepts are addressed to show the scope of business and the legal components that contribute to structure, operations, and success. These courses transfer as part of the AA Business Degree With Designation and are AA approved electives.

Certificate Requirements

Required Courses

BUS 1015	Introduction to Business	3
BUS 2016	Legal Environment of Business	3

BUS 2017 Business Communications 3
TOTAL CREDIT HOURS: 9

Small Business/Entrepreneurship Certificate

This condensed program offers you the opportunity to obtain an overview of small business concepts to get you started on the road to establishing your own small business. This program introduces concepts and cutting-edge processes for those individuals who choose to lead, rather than follow.

Certificate Requirements

Required Courses

Select 8 Credits from the following:

SBM 1001	Starting a Small Business	1
SBM 1003	Legal Aspects-Small Business	1
SBM 1006	Recordkeeping-Small Business	1
SBM 1008	Marketing for a Small Business	1
SBM 1010	Managing a Small Business	1
SBM 1012	Financing a Small Business	1
SBM 1013	Writing a Business Plan	1
SBM 1075	Special Topics	1-3
MAN 1017	Time Management	1
BUS 1002	Entrepreneurial Operations	3

TOTAL CREDIT HOURS: 8

International Business Certificate

This certificate provides insight into the challenges and opportunities provided by globalization and the global business climate.

Certificate Requirements

Required Courses

BUS 2003	Intro to International Business	3
MAR 2040	International Marketing	3
GenEd	GenEd Course: International focused Gen Ed course (see faculty advisor)	3

TOTAL CREDIT HOURS: 9

Leadership Certificate

This certificate exemplifies the trend of developing leaders everywhere in society and business. It offers a dynamic learning experience that helps students realize their leadership potential with innovative coursework applied in a hands-on environment.

Certificate Requirements

Required Courses

MAN 2024	Leadership	3
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Subtotal: 3

Choose two from the following (6 credits):

MAN 1050	Change through Challenge: ()	3
MAN 2010	Aligning Tech w/ Business Stgy	3
MAN 2012	Negotiation/Conflict Resol	3
MAN 2015	Organizational Behavior	3
MAN 2080	Internship	3

Subtotal: 6

TOTAL CREDIT HOURS: 9

Management Certificate

This certificate creates a focused course of study combining business and management principles. It supplements current business experience to increase your competitive value or create a well-rounded groundwork of management.

Certificate Requirements

Required Courses

MAN 2026	Principles of Management	3
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Subtotal: 3

Choose two from the following (6 credits):

MAN 1028	Human Relation-Organizations	3
MAN 2000	Human Resource Management I	3
MAN 2012	Negotiation/Conflict Resol	3
MAN 2015	Organizational Behavior	3

Subtotal: 6

TOTAL CREDIT HOURS: 9

Marketing Certificate

This certificate introduces students to the creative strategies related to product development, promotion, sales and distribution to unique customer markets.

Certificate Requirements

Choose three courses from the following:

MAR 1055	Social Media for Business	3
MAR 2016	Principles of Marketing	3
MAR 2020	Principles of Advertising	3
MAR 2040	International Marketing	3

TOTAL CREDIT HOURS: 9

Nonprofit Management Certificate

This certificate prepares students interested in a mission-driven career with a strong foundation in nonprofit operations and an understanding of the role of nonprofits in our society.

Certificate Requirements

Required Courses

BUS 2050	Intro to Nonprofit Orgs	3
BUS 2051	Design and Evaluation-NPO	3
BUS 2052	Bldg Financial Support - NPOs	3
BUS 2053	Nonprofit Financial Management	3
BUS 2081	Internship	1-3
Elective	One Elective Course (see BUS program advisor)	1

TOTAL CREDIT HOURS: 16

Real Estate Certificate

These courses meet the educational requirements of the Colorado Real Estate Commission for a Colorado Real Estate Broker's license.

Certificate Requirements

Required Courses

REE 2001	Real Estate Brokers I	6
REE 2002	Real Estate Brokers II	6

TOTAL CREDIT HOURS: 12

Workforce Readiness Certificate

Learning about the workplace and being prepared to enter the workplace can be worlds apart. This focused certificate gives students a blend of soft skills, theory, and practical application (with practice) to support entry or re-entry into the workforce.

Certificate Requirements

Required Courses

BUS 1018	Business Survival Skills	3
MAR 1006	Marketing Your Image	3
		TOTAL CREDIT HOURS: 6

Business Degrees

Business Administration AAS Degree

The Business Administration AAS degree with emphasis areas is designed to create a practical approach to industry with options to build entrepreneurial, international, leadership, management, marketing, or nonprofit expertise.

Degree Requirements

Accounting Fundamentals Certificate

ACC 1021	Accounting Principles I	4
ACC 1022	Accounting Principles II	4
		Subtotal: 8

Business Foundations Certificate

BUS 1015	Introduction to Business	3
BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications	3
		Subtotal: 9

Workforce Readiness Certificate

BUS 1018	Business Survival Skills	3
MAR 1006	Marketing Your Image	3
		Subtotal: 6

Required Courses

BUS 1016	Personal Finance	3
MAN 2030	Corporate Ethics & Social Resp	3
		Subtotal: 6

Emphasis area – pick one:

Small Business/Entrepreneurship Certificate	8
International Business Certificate	9
Leadership Certificate	9
Management Certificate	9
Marketing Certificate	9
Nonprofit Management Certificate	16
Subtotal: 8-16	

Faculty advisor-approved business electives

(Recommended: ACC, BUS, MAN, MAR, REE, SBM)

Subtotal: 7

Note: 8 elective credits required if 8-credit Entrepreneurship Certificate is selected and 0 electives required if 16 credit Nonprofit Pathways Certificate is selected.

Required General Education Courses:

ENG 1021	English Composition I: CO1	3
	or	
ENG 1031	Technical Writing I: CO1	3
MAT 1140	Career Math	3
ECO 2002	Prin of Microeconomics: SS1	3
	or	
ECO 2001	Prin of Macroeconomics: SS1	3
		Subtotal: 9

Select 3 credits from one of the two following areas:

Arts & Humanities or Natural & Physical Sciences

Subtotal: 3

General education electives

Select 3 additional credits

Subtotal: 3

TOTAL CREDIT HOURS: 60

Business Interdisciplinary AAS Degree

The Business – Interdisciplinary Degree gives you the opportunity to apply and blend career and technical skills with core business courses. You will acquire the knowledge and background to understand the various components required to operate a successful business.

Degree Requirements

Accounting Fundamentals Certificate:

ACC 1021	Accounting Principles I	4
ACC 1022	Accounting Principles II	4
		Subtotal: 8

Business Foundations Certificate:

BUS 1015	Introduction to Business	3
BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications	3
		Subtotal: 9

Required Courses

BUS 1002	Entrepreneurial Operations	3
BUS 1016	Personal Finance	3
	or faculty-approved elective	
MAN 2026	Principles of Management	3
MAR 2016	Principles of Marketing	3
		Subtotal: 12

Interdisciplinary credits

16 credits required from any approved CTE program outside of the business discipline area. Interdisciplinary credits must be in 100-level courses or higher in one vocational program within the Community Colleges of Colorado or the equivalent through an articulation agreement. (See faculty advisor.)

Subtotal: 16

Required General Education Courses:

ENG 1021	English Composition I: CO1	3
	or	
ENG 1031	Technical Writing I: CO1	3
MAT 1140	Career Math	3
ECO 2002	Prin of Microeconomics: SS1	3
	or	
ECO 2001	Prin of Macroeconomics: SS1	3
PHI 1012	Ethics:AH3	3
		Subtotal: 12

General education electives

Choose 3 additional credits of general education electives

Subtotal: 3

TOTAL CREDIT HOURS: 60

Business Real Estate AAS Degree

The Business - Real Estate Degree combines real estate expertise with foundational business concepts so you can operate successfully in a real estate-related business.

Degree Requirements

Accounting Fundamentals Certificate:

ACC 1021	Accounting Principles I	4
ACC 1022	Accounting Principles II	4
		Subtotal: 8

Business Foundations Certificate:

BUS 1015	Introduction to Business	3
BUS 2016	Legal Environment of Business	3
BUS 2017	Business Communications	3
		Subtotal: 9

Real Estate Certificate:

REE 2001	Real Estate Brokers I	6
REE 2002	Real Estate Brokers II	6
		Subtotal: 12

Required Courses

BUS 1002	Entrepreneurial Operations	3
BUS 1016	Personal Finance	3
CIS 1018	Intro PC Applications	3
MAN 2012	Negotiation/Conflict Resol	3
MAN 2024	Leadership	3
MAR 2016	Principles of Marketing	3
		Subtotal: 18

Required General Education Courses:

ENG 1021	English Composition I: CO1 or	3
ENG 1031	Technical Writing I: CO1	3
MAT 1140	Career Math	3
ECO 2001	Prin of Macroeconomics: SS1	3
PHI 1012	Ethics:AH3	3
		Subtotal: 12

Faculty advisor-approved general education elective

Subtotal: 3

TOTAL CREDIT HOURS: 62

Business AA Degree With Designation

If you plan to transfer to a four-year college or university to complete a major in Business or a closely related field, you should complete the AA Business Degree. This degree reflects the business transfer agreement with the public four-year colleges and universities in Colorado. Consult with a faculty or academic advisor before beginning this program of study.

See Business AA Designated Degree Requirements (p. 58)

Carpentry

www.rrcc.edu/carpentry

This program provides theory and hands-on training for entry-level skills through craftsman-level competencies in a variety of areas. All courses include current industry topics such as green building, energy conservation, and efficiency techniques. Areas of emphasis are designed to meet individual needs, whether you are a part-time or full-time student. All classes are open to all skill levels unless otherwise noted. Tools are provided for entry-level classes; personal tool requirements may increase with proficiency.

Advising: Students should contact 303-914-6306 for advising.

Related course work may be found under:

Air Conditioning, Heating and Refrigeration, Electricity, Fine Woodworking, and Plumbing.

Certificates

Residential Remodeling (p. 90)

Advanced Remodeling (p. 90)

Carpentry Certificates

Residential Remodeling Certificate

Certificate Requirements

Required Courses

CAR 1003	Carpentry Basics	4
CAR 1036	Remodeling, Renovation/Addns	4
CAR 1015	Form & Foundation Systems	1
CAR 1023	Roof Framing	1
CAR 1025	Roofing Materials & Methods	1
CAR 1034	Exterior Finishes and Trim	4
CAR 1050	Interior Trim - General	1
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1

TOTAL CREDIT HOURS: 18

Advanced Remodeling Certificate

Certificate Requirements

Required Courses

CON 1005	Construction Technology	4
CAR 1003	Carpentry Basics	4
CAR 1036	Remodeling, Renovation/Addns	4
CAR 1015	Form & Foundation Systems	1
CAR 1023	Roof Framing	1
CAR 1025	Roofing Materials & Methods	1
CAR 1034	Exterior Finishes and Trim	4
CAR 1055	Interior Trim and Built-ins	4
CAR 1060	Floor Finishes	1
CAR 1066	Stair Design & Construction	4
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1

TOTAL CREDIT HOURS: 30

Chemistry

www.rrcc.edu/chemistry

Degree: Associate of Science

Chemistry AS Degree With Designation (p. 90)

Chemistry AS Degree With Designation

For those planning to transfer to a four-year college or university to complete a major in Chemistry, consult with a faculty advisor before beginning this area of study. Courses provide the basic preparation leading to chemistry-related careers. Some courses might not be offered each semester.

See Chemistry AS Designated Degree Requirements (p. 58)

Communication

www.rrcc.edu/communication

Degree: Associate of Arts

Communication AA Degree With Designation (p. 91)

Communication AA Degree With Designation

The completion of the Communication AA Degree With Designation is appropriate for students who plan to transfer to a state four-year college or university to complete a major in Communication. Consult with a faculty advisor if planning this program of study.

See **Communication AA Designated Degree Requirements** (p. 59)

Computer Information Systems

www.rccc.edu/computer-technology

The Computer Information Systems Certificates and Degree programs prepare you for entry-level position. You must earn a minimum grade of "C" in all CIS, CNG, CSC, and CWB courses required for all certificates and degree programs. All skill set courses (CIS, CNG, CSC and CWB) must have been completed within 7 years of the current date for use within the earned program. For Computer Science, Programming, and Software Developer degrees and/or certificates, see Computer Science program (p. 95) section.

Semester Pathway plans: www.rccc.edu/computer-technology/degrees-and-certificates.

Certificates

- Business Web Applications (p. 91)
- Cisco Network Associate (p. 91)
- Cyber Security (p. 91)
- Desktop Support (p. 91)
- Game Development (p. 92)
- Network & Systems (p. 92)
- Web Development: Front-End (p. 92)
- Web Development: Back-End (p. 92)

Degrees: Associate of Applied Science

- Cyber Security (p. 92)
- Desktop Support (p. 93)
- Game Development (p. 93)
- Network & Systems (p. 94)
- Web Development (p. 94)

Computer Information Systems Certificates

Business Web Applications Certificate

The Business Web Applications certificate prepares the student for an entry level position in an office environment as a technical assistant administrative assistant, purchasing assistant, or executive assistant. Duties for this position include maintaining applications documents, updating web sites, and organizing and maintaining daily documentation in a database or spreadsheet.

Certificate Requirements

Required Courses

CIS 1018	Intro PC Applications	3
CIS 1055	Complete Spreadsheets	3
CWB 1010	Intro to Web Authoring	3
		Subtotal: 9

Choose one from the following:

CIS 1035	Complete Word Processing	3
CIS 1045	Intro to Desktop Database	3
CIS 1065	Complete Presentation Graphics	3
Faculty advisor-	Faculty advisor-approved course	3
approved course		
		Subtotal: 3

Choose two of the following

CIS 2040	Database Design & Development	3
CNG 1001	Networking Fundamentals	3
CSC 1019	Intro. to Programming (lang)	3
CWB 2009	Web Content Management Syst	3
Faculty advisor-	Faculty advisor-approved course	3
approved course		

Subtotal: 6

TOTAL CREDIT HOURS: 18

Cisco Network Associate Certificate

This area of emphasis prepares you to take Cisco Certified Network Associate (CCNA) certification. Content includes basic network principles, basic router and switch configuration, intermediate routing and switching, and Wide Area Networking (WAN). Focus is on hands-on performance and assessment.

Requirements

Required Courses

CNG 1031	Prin of Information Assurance	3
CNG 2060	CISCO Network Associate I	5
CNG 2061	CISCO Network Associate II	5
CNG 2062	CISCO Network Associate III	5
CNG 2063	CISCO Network Associate IV	5
CNG 2070	CCNA Security	5

TOTAL CREDIT HOURS: 28

Cyber Security Certificate

This area of emphasis provides you with the skills necessary to protect computing systems and networks that have an important impact on data confidentiality, integrity, and availability. You will learn about computer network threats and the appropriate incident response, to include defenses, countermeasures, and computer forensics. You will also be prepared to take the Advanced Security Practitioner certification exam.

Certificate Prerequisite

Successful completion of CIS 2020, CNG 1024, CNG 1025, CNG 1032, CNG 1033.

Required Courses

CNG 1036	Guide to IT Disaster Recovery	3
CNG 2056	Vulnerability Assessment I	3
CNG 2057	Netwrk Defense/Countermeasures	3
CNG 2058	Digital Forensics	4
CNG 2059	Enterprise Security	4
CIS 2068	Systems Analysis and Design I	3

TOTAL CREDIT HOURS: 20

Desktop Support Certificate

This area of emphasis provides both hardware and Windows operating systems experience needed to work as a PC support and repair person. It also exposes the student to the basic fundamentals of networking and IT security. The student will also be prepared to take the A+ certification exams.

Certificate Prerequisite

Working knowledge of computers and computer basics.

Required Courses

CIS 1018	Intro PC Applications	3
CSC 1019	Intro. to Programming (lang)	3
CNG 1021	Computer Technician: A+	4
CNG 1022	Computer Technician II: A+	4
CNG 1031	Prin of Information Assurance	3

TOTAL CREDIT HOURS: 17

Game Development Certificate

This area of emphasis prepares you for entry-level positions in the gaming industry. It also allows you to develop strong technical skills in programming, which permits transfer to a four-year university.

Certificate Prerequisite

Working knowledge of computers and computer basics.

Required Courses

CSC 1019	Intro. to Programming (lang)	3
CSC 1026	Game Design & Development	3
CSC 1060	Computer Science I: (Language)	4
CSC 2000	Game Programming I	3
CIS 2040	Database Design & Development	3
		Subtotal: 16

Choose one from the following:

CSC 2046	Mobile App Development :()	3
Faculty advisor-	Faculty advisor-approved course	3
approved course		

Subtotal: 3

TOTAL CREDIT HOURS: 19

Network & Systems Certificate

This area of emphasis prepares you for entry-level positions in the networking field. You will gain hands-on experience with network technologies, installation and configuration, media and topologies, management, and security. Upon successful completion of the program, you will have the needed background to prepare to take the Network+ and Security+ exams.

Certificate Requirements

Required Courses

CIS 2020	Fundamentals of Unix	3
CNG 1001	Networking Fundamentals	3
CNG 1032	Network Security Fundamentals	3
CNG 1033	Fire Walls/Network Security	3
CNG 2002	Unix/Linux Server Admin	3
CNG 2012	Configuring Windows Server	4
		TOTAL CREDIT HOURS: 19

Web Development: Front-End Certificate

This area of emphasis prepares you for an entry-level position as a Front-end developer. Curriculum offerings include developing a website's user-facing through programming. Front-end courses include, but are not limited to: HTML, CSS, and JavaScript programming.

Certificate Prerequisite

Working knowledge of computers and computer basics.

Required Courses

CWB 1010	Intro to Web Authoring	3
CSC 1019	Intro. to Programming (lang)	3
CSC 1060	Computer Science I: (Language)	4
		Subtotal: 10

Choose one of the following:

CWB 2005	Client-side Scripting: (Soft)	3
Faculty advisor-	Faculty advisor-approved elective	3
approved elective		

Subtotal: 3

Choose one of the following:

CWB 2009	Web Content Management Syst	3
Faculty advisor-	Faculty advisor-approved elective	3
approved elective		

Subtotal: 3

TOTAL CREDIT HOURS: 16

Web Development: Back-End Certificate

This area of emphasis prepares you for an entry-level position as a Back-end developer. Course offerings include high-level programming and the integration of databases. The curriculum offerings will include but are not limit to server-side languages such as PHP, Ruby, Python, Java, and .NET to build an application. Tools will include MySQL, Oracle, and SQL Server to find, save, or change data and serve it back to the user in front-end code.

Certificate Prerequisite

Working knowledge of computers and computer basics.

Required Courses

CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CSC 2040	Java Programming	3
		Subtotal: 9

Choose one of the following:

CWB 2008	Web App Dev: (Dev Tool(s))	3
Faculty advisor-	Faculty advisor-approved elective	3
approved elective		

Subtotal: 3

Choose one of the following:

CSC 2017	Advanced Python Programming	3
Faculty advisor-	Faculty advisor-approved elective	3
approved elective		

Subtotal: 3

Choose one of the following:

CSC 2041	Advanced Java Programming	3
Faculty advisor-	Faculty advisor-approved elective	3
approved elective		

Subtotal: 3

TOTAL CREDIT HOURS: 18

Computer Information Systems Degrees

Cyber Security AAS Degree

This area of emphasis provides you with the skills necessary to protect computing systems and networks that have an important impact on data confidentiality, integrity, and availability. You will learn about computer network threats and the appropriate incident response, to include defenses, countermeasures, and computer forensics.

AAS Prerequisites

Required Courses

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4
		Subtotal: 7

Choose one of the following

ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3
		Subtotal: 3

Choose one of the following

BUS 1015	Introduction to Business	3
BUS 1020	Introduction to E-Commerce	3
BUS 2016	Legal Environment of Business	3
BUS 2026	Business Statistics	3
ACC 1021	Accounting Principles I	4
		Subtotal: 3

Choose one of the following:

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3

Subtotal: 3

Credit from any two of the following three areas:

Arts & Humanities (ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE)

Natural & Physical Sciences (AST, BIO, CHE, ENV, GEY, PHY, SCI)

Social & Behavioral Sciences (ANT, ECO, GEO, HIS, POS, PSY, SOC)

Subtotal: 6

Required Courses

CSC 1019	Intro. to Programming (lang)	3
CIS 2020	Fundamentals of Unix	3
CNG 1001	Networking Fundamentals	3
CNG 1032	Network Security Fundamentals	3
CNG 1033	Fire Walls/Network Security	3
CNG 1036	Guide to IT Disaster Recovery	3
CNG 2043	Cloud Security and Cyber Law	3
CNG 2056	Vulnerability Assessment I	3
CNG 2057	Netwrk Defense/Countermeasures	3
CNG 2058	Digital Forensics	4
CNG 2059	Enterprise Security	4
CIS 2068	Systems Analysis and Design I	3
Subtotal:		38

Choose one of the following

CIS 2089	Capstone	3
CNG 2080	Internship	3
Subtotal:		3

TOTAL CREDIT HOURS: 63-64

Desktop Support AAS Degree

This area of emphasis provides both hardware and operating systems experience needed to work as a support person for both local and wide area network environments.

AAS Prerequisite

Working knowledge of computers and computer basics.

Required Courses

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4
Subtotal:		7

Choose one of the following

ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3
Subtotal:		3

Choose one of the following:

BUS 1015	Introduction to Business	3
BUS 1020	Introduction to E-Commerce	3
BUS 2016	Legal Environment of Business	3
BUS 2026	Business Statistics	3
ACC 1021	Accounting Principles I	4
Subtotal:		3

Choose one of the following

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
Subtotal:		3

Credit from any two of the following three areas:

Arts & Humanities (ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE)

Natural & Physical Sciences (AST, BIO, CHE, ENV, GEY, PHY, SCI)

Social & Behavioral Sciences (ANT, ECO, GEO, HIS, POS, PSY, SOC)

Subtotal: 6

Required Courses

CIS 1018	Intro PC Applications	3
CSC 1019	Intro. to Programming (lang)	3
CIS 2020	Fundamentals of Unix	3
CIS 2040	Database Design & Development	3
CNG 1001	Networking Fundamentals	3
CNG 1021	Computer Technician: A+	4
CNG 1022	Computer Technician II: A+	4
CNG 1031	Prin of Information Assurance	3
CNG 1032	Network Security Fundamentals	3
CNG 1036	Guide to IT Disaster Recovery	3
CNG 2011	Windows Configuration: (OS)	3
CIS 2068	Systems Analysis and Design I	3
Subtotal:		38

Choose one of the following:

CIS 2089	Capstone	3
CNG 2080	Internship	3
Subtotal:		3

TOTAL CREDIT HOURS: 63

Game Development AAS Degree

This area of emphasis prepares you for an entry-level position as a developer in the gaming industry. It also allows you to develop strong technical skills in programming, which permits transfer to a four-year university.

AAS Prerequisite

Working knowledge of computers and computer basics.

Required Courses

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4
Subtotal:		7

Choose one of the following

ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3
Subtotal:		3

Choose one of the following faculty approved business

courses:		
BUS 1015	Introduction to Business	3
BUS 1020	Introduction to E-Commerce	3
BUS 2016	Legal Environment of Business	3
BUS 2026	Business Statistics	3
ACC 1021	Accounting Principles I	4
Subtotal:		3

Choose one of the following

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
Subtotal:		3

Credit from any two of the following three areas:

Arts & Humanities (ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE)

Natural & Physical Sciences (AST, BIO, CHE, ENV, GEY, PHY, SCI)

Social & Behavioral Sciences (ANT, ECO, GEO, HIS, POS, PSY, SOC)

Subtotal: 6

Required Courses

CSC 1019	Intro. to Programming (lang)	3
CSC 1026	Game Design & Development	3
CSC 1060	Computer Science I: (Language)	4
CSC 2017	Advanced Python Programming	3
CSC 2000	Game Programming I	3
CIS 2020	Fundamentals of Unix	3
CIS 2068	Systems Analysis and Design I	3
Subtotal:		22

Choose 15 credit hours from the following

CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CSC 1061	Computer Sci II: (Language)	4
CSC 2040	Java Programming	3
CSC 2041	Advanced Java Programming	3
CSC 2046	Mobile App Development :()	3
CNG 1001	Networking Fundamentals	3
CNG 1031	Prin of Information Assurance	3
Faculty advisor-approved elective	Faculty advisor-approved elective	3
		Subtotal: 15

Choose one of the following

CIS 2089	Capstone	3
CSC 2080	Internship	3
		Subtotal: 3
TOTAL CREDIT HOURS: 62		

Network & Systems AAS Degree

This area of emphasis provides both hardware and operating systems experience needed to work as a support person for both local and wide area networks. This area of emphasis prepares you for entry-level positions in the computer networking field. Students in this program gain hands-on experience with network technologies, installation and configuration, media and topologies, management, and security. Upon successful completion of the program, you will have the needed background to prepare to take one or more of the following exams: Network+ & Security+.

Degree Requirements**Required Courses**

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4
		Subtotal: 7

Choose one of the following:

ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3
		Subtotal: 3

Choose one of the following Faculty Approved Business**Course:**

BUS 1015	Introduction to Business	3
BUS 1020	Introduction to E-Commerce	3
BUS 2016	Legal Environment of Business	3
BUS 2026	Business Statistics	3
ACC 1021	Accounting Principles I	4
		Subtotal: 3

Choose one of the following

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
		Subtotal: 3

Credit from any two of the following three areas:

Arts & Humanities (ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE)

Natural & Physical Sciences (AST, BIO, CHE, ENV, GEY, PHY, SCI)

Social & Behavioral Sciences (ANT, ECO, GEO, HIS, POS, PSY, SOC)

Subtotal: 6**Required Courses**

CSC 1019	Intro. to Programming (lang)	3
CIS 2020	Fundamentals of Unix	3
CIS 2040	Database Design & Development	3
CIS 2068	Systems Analysis and Design I	3
CNG 1001	Networking Fundamentals	3
CNG 1031	Prin of Information Assurance	3
CNG 1032	Network Security Fundamentals	3
CNG 1033	Fire Walls/Network Security	3

CNG 1036	Guide to IT Disaster Recovery	3
CNG 1042	Intro to Cloud Computing	3
CNG 2002	Unix/Linux Server Admin	3
CNG 2012	Configuring Windows Server	4
		Subtotal: 37

Choose one of the following:

CIS 2089	Capstone	3
CNG 2080	Internship	3
		Subtotal: 3
TOTAL CREDIT HOURS: 62		

Web Development AAS Degree

This area of emphasis prepares you for an entry-level position in Web Design/Development with a focus on the programming and database aspects of websites. Course offerings provide a mix of programming and applications that have been researched and retrofitted to meet the demands of today's Web fields.

AAS Prerequisite

Working knowledge of computers and computer basics.

Required Courses

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4
		Subtotal: 7

Choose one of the following

ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3
		Subtotal: 3

Choose one of the following Faculty Approved Business**Course:**

BUS 1015	Introduction to Business	3
BUS 1020	Introduction to E-Commerce	3
BUS 2016	Legal Environment of Business	3
BUS 2026	Business Statistics	3
ACC 1021	Accounting Principles I	4
		Subtotal: 3

Choose one of the following:

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
		Subtotal: 3

Credit from any two of the following three areas:

Arts & Humanities (ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE)

Natural & Physical Sciences (AST, BIO, CHE, ENV, GEY, PHY, SCI)

Social & Behavioral Sciences (ANT, ECO, GEO, HIS, POS, PSY, SOC)

Subtotal: 6**Required Courses**

CWB 1010	Intro to Web Authoring	3
CSC 1019	Intro. to Programming (lang)	3
CSC 1060	Computer Science I: (Language)	4
CIS 2020	Fundamentals of Unix	3
CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CSC 2017	Advanced Python Programming	3
CWB 2005	Client-side Scripting: (Soft)	3
CIS 2068	Systems Analysis and Design I	3
		Subtotal: 28

Choose 9 credits from the following:

CIS 1018	Intro PC Applications	3
CSC 1061	Computer Sci II: (Language)	4
CSC 2040	Java Programming	3
CSC 2041	Advanced Java Programming	3
CWB 2008	Web App Dev: (Dev Tool(s))	3
CWB 2009	Web Content Management Syst	3
Faculty advisor-approved elective	Faculty advisor-approved elective	3

Subtotal: 9

TOTAL CREDIT HOURS: 18

Choose one from the following:

CIS 2089	Capstone	3
CWB 2080	Internship	3

Subtotal: 3

TOTAL CREDIT HOURS: 62

Computer Science

www.rccc.edu/computer-technology

The Computer Science Certificates and Degree programs prepare you for entry-level position. You must earn a minimum grade of "C" in all CIS, CNG, CSC, and CWB courses required for all certificates and degree programs. All skill set courses (CIS, CNG, CSC and CWB) must have been completed within 7 years of the current date for use within the earned program. For Computer Science, Programming, and Software Developer degrees and/or certificates, see Computer Science program section. www.rccc.edu/computer-technology/degrees-and-certificates.

Certificates

- Computer Science (p. 95)
- Engineering and Computer Science (p. 95)
- Software Developer (p. 95)

Degrees: Associate of Applied Science

- Secure Software Development (p. 96)
- Software Development (p. 96)

Degree: Bachelor of Applied Science

- Secure Software Development (p. 97)

Degree: Associate of Science

- Computer Science AS Degree with Designation (p. 60)

Area of Study

- Computer Science Area of Study (p. 98)

Computer Science Certificates

Computer Science Certificate

The Computer Science Certificate emphasis at Red Rocks Community College prepares students in an entry-level position in the fields involving software applications, programming, junior programmer, software support technician and software tester. Topics include fundamental programming and Computer Science curriculum in both C++ and Python programming languages and fundamentals of the Unix operating system. Students focus on design and problem solving algorithms working on the programming life cycle of analysis, design, implement, test and maintain.

Certificate Prerequisite:

Working knowledge of computers and computer basics.

Required Courses

CSC 1019	Intro. to Programming (lang)	3
CSC 1060	Computer Science I: (Language)	4
CSC 1061	Computer Sci II: (Language)	4
CSC 2025	Computr Arch/Assembly Language	4
		Subtotal: 15

Choose one of the following:

CSC 1029	Introduction to Secure Coding	3
CNG 1001	Networking Fundamentals	3
CIS 2020	Fundamentals of Unix	3
CIS 2068	Systems Analysis and Design I	3
Faculty advisor-approved elective	Faculty advisor-approved elective	3
		Subtotal: 3

Engineering and Computer Science Certificate

Certificate Requirements

Required Courses

CSC 1019	Intro. to Programming (lang)	3
CSC 1060	Computer Science I: (Language)	4
		Subtotal: 7

Choose one of the following:

CSC 1061	Computer Sci II: (Language)	4
CSC 2025	Computr Arch/Assembly Language	4
Faculty advisor-approved elective	Faculty advisor-approved elective	4
		Subtotal: 4

Choose one of the following

EGT 1110	Intro Design/Engineering Apps	3
Faculty advisor-approved elective	Faculty advisor-approved elective	3
		Subtotal: 3

Choose one of the following:

CSC 2080	Internship	3
EGT 2080	Internship	3
Faculty approved GT course	Faculty approved GT course	3
		Subtotal: 3

TOTAL CREDIT HOURS: 17

Software Developer Certificate

The Software Developer Certificate at Red Rocks Community College prepares students for an entry-level position in the fields of software developer, application developer, junior programmer, web applications developer, database developer, software support technician and software tester involving computer software development. The courses provide a foundation in programming skills using a combination of analysis, design, object-oriented programming and relational databases, programming languages in C# and Java and development tools. Software development lifecycles and practices are examined.

Certificate Prerequisite

CSC 1019 Introduction to Programming: Python

Required Courses

CSC 2017	Advanced Python Programming	3
CWB 1010	Intro to Web Authoring	3
CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CSC 2040	Java Programming	3
		Subtotal: 15

Choose one of the following:

CSC 2041	Advanced Java Programming	3
CSC 2045	Secure Software Dev. (Lang.)	3
CSC 2046	Mobile App Development :()	3
CSC 2080	Internship	3
CIS 2089	Capstone	3
CNG 1031	Prin of Information Assurance	3
CWB 2005	Client-side Scripting: (Soft)	3
Faculty advisor-approved elective	Faculty advisor-approved elective	3
		Subtotal: 3

TOTAL CREDIT HOURS: 18

Computer Science Degrees

Secure Software Development AAS Degree

This area of emphasis prepares you to become an entry-level programmer focusing on secure software development practices. Learn the current secure software practices to reduce vulnerabilities in the code before deployment, validate input from data sources to prevent security risks at the software level. You will learn to design, develop, build, troubleshoot, debug, maintain, and test secure software application programs in a variety of programming languages.

AAS Prerequisite

Working knowledge of computers and computer basics.

Required Courses

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4
		Subtotal: 7

Choose one of the following:

ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3
		Subtotal: 3

Choose one of the following faculty approved business

courses:

BUS 1015	Introduction to Business	3
BUS 1020	Introduction to E-Commerce	3
BUS 2016	Legal Environment of Business	3
BUS 2026	Business Statistics	3
ACC 1021	Accounting Principles I	4
		Subtotal: 3-4

Choose one of the following:

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
		Subtotal: 3

Credit from any two of the following three areas:

Arts & Humanities (ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE)

Natural & Physical Sciences (AST, BIO, CHE, ENV, GEY, PHY, SCI)

Social & Behavioral Sciences (ANT, ECO, GEO, HIS, POS, PSY, SOC)

Subtotal: 6

Required Courses

CSC 1019	Intro. to Programming (lang)	3
CSC 1060	Computer Science I: (Language)	4
CSC 1061	Computer Sci II: (Language)	4
CSC 2025	Computr Arch/Assembly Language	4
CSC 1029	Introduction to Secure Coding	3
CSC 2045	Secure Software Dev. (Lang.)	3
CIS 2020	Fundamentals of Unix	3
CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CIS 2068	Systems Analysis and Design I	3
		Subtotal: 33

Choose 3 credits from the following:

CSC 2017	Advanced Python Programming	3
CSC 2040	Java Programming	3
CSC 2041	Advanced Java Programming	3
CSC 2046	Mobile App Development :()	3
CNG 1001	Networking Fundamentals	3
CNG 1031	Prin of Information Assurance	3
CNG 1032	Network Security Fundamentals	3
CWB 1010	Intro to Web Authoring	3
CWB 2005	Client-side Scripting: (Soft)	3
CWB 2008	Web App Dev: (Dev Tool(s))	3

Faculty advisor-approved elective	Faculty advisor-approved elective	3
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Subtotal: 3

Choose one of the following:

CIS 2089	Capstone	3
CSC 2080	Internship	3

Subtotal: 3

TOTAL CREDIT HOURS: 61

Software Development AAS Degree

This area of emphasis prepares you to become an entry-level programmer. You will design, develop, build, troubleshoot, debug, maintain, and test computer application software programs in a variety of programming languages. Programs will range from simple business programs to the design and completion of a complex business system. The Software Development Associate of Applied Science degree prepares you for entry-level position.

AAS Prerequisite

Working knowledge of computers and computer basics.

Required Courses

ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4
		Subtotal: 7

Choose one of the following

ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3
		Subtotal: 3

Choose one of the following faculty approved business

courses:

BUS 1015	Introduction to Business	3
BUS 1020	Introduction to E-Commerce	3
BUS 2016	Legal Environment of Business	3
BUS 2026	Business Statistics	3
ACC 1021	Accounting Principles I	4
		Subtotal: 3

Choose one of the following

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
		Subtotal: 3

Credit from any two of the following three areas:

Arts & Humanities (ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE)

Natural & Physical Sciences (AST, BIO, CHE, ENV, GEY, PHY, SCI)

Social & Behavioral Sciences (ANT, ECO, GEO, HIS, POS, PSY, SOC)

Subtotal: 6

Required Courses

CSC 1019	Intro. to Programming (lang)	3
CSC 1060	Computer Science I: (Language)	4
CSC 2040	Java Programming	3
CIS 2020	Fundamentals of Unix	3
CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CIS 2068	Systems Analysis and Design I	3
CWB 1010	Intro to Web Authoring	3
		Subtotal: 25

Choose 12 credits from the following:

CSC 1029	Introduction to Secure Coding	3
CSC 1061	Computer Sci II: (Language)	4
CSC 2017	Advanced Python Programming	3
CSC 2025	Computr Arch/Assembly Language	4
CSC 2041	Advanced Java Programming	3
CSC 2045	Secure Software Dev. (Lang.)	3
CSC 2046	Mobile App Development :()	3
CWB 2005	Client-side Scripting: (Soft)	3

CNG 1001	Networking Fundamentals	3
CNG 1031	Prin of Information Assurance	3
Faculty advisor-approved elective	Faculty advisor-approved elective	3
		Subtotal: 12

Choose one of the following

CIS 2089	Capstone	3
CSC 2080	Internship	3
		Subtotal: 3
TOTAL CREDIT HOURS: 62		

Secure Software Development BAS Degree

The Bachelor of Applied Science (BAS) degree in Secure Software Development, “The Software side of Cyber Security”. The degree requires completion of 120 credit hours. Students will be required to declare the BAS through admissions. Students are required to meet with Computer Technology/Computer Science faculty to set up an initial subject-specific advising meeting; develop a student plan; and review their general education requirements/transfer credits. Satisfactory completion (grade of C or higher), is mandatory for all core and computer prefixed (CIS,CNG,CSC,CWB) degree coursework. All skill set courses (CIS, CNG, CSC and CWB) must have been completed within 7 years of the current date for use within the earned program. Course work for this degree can be completed in traditional, hybrid, or online format.

This area of emphasis prepares you to become a programmer in secure software development. You will develop skills using multiple programming languages and databases and implement component security using industry’s best security practices. You will also design, develop, and test secure software applications; conduct software penetration testing; and provide recommendations for reducing computer security risks. This degree also focuses on critical elements of software security; implement techniques for mitigating security risks; and you will identify and develop software solutions to threats and attacks in order to minimize risk and protect privacy.

Degree Requirements

General Education Required Courses (32 credits)

English

ENG 1021	English Composition I: CO1	3
		Subtotal: 3

Mathematics

MAT 1340	College Algebra: MA1 or higher	4
		Subtotal: 4

History

Choose one History GT-H1 Course (HIS)

Subtotal: 3

Social and Behavioral Science

Choose one Social and Behavioral Science GT Course (ANT, ECO, GEO, HIS, POS, PSY, SOC)

Subtotal: 3

Arts and Humanities

Choose two Arts and Humanities GT Courses (ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE)

Subtotal: 6

Natural and Physical Science

Choose two Natural and Physical Sciences GT Courses (AST, BIO, CHE, ENV, GEY, PHY, SCI)

Subtotal: 7

English

Choose one from the following:

ENG 1022	English Composition II: CO2	3
ENG 1031	Technical Writing I: CO1	3
		Subtotal: 3

Communication

Choose one from the following:

COM 1150	Public Speaking	3
COM 1250	Interpersonal Comm: SS3	3
		Subtotal: 3

Business Course

Choose one from the following:

BUS 1015	Introduction to Business	3
BUS 2016	Legal Environment of Business	3
BUS 2026	Business Statistics	3
		Subtotal: 3

Computer Technology Courses

Lower Division Computer Technology Courses (33 credits)

CIS 2020	Fundamentals of Unix	3
CIS 2040	Database Design & Development	3
CIS 2043	Introduction to SQL	3
CIS 2068	Systems Analysis and Design I	3
CSC 1019	Intro. to Programming (lang)	3
CSC 1029	Introduction to Secure Coding	3
CSC 1060	Computer Science I: (Language)	4
CSC 1061	Computer Sci II: (Language)	4
CSC 2025	Comput Arch/Assembly Language	4
CSC 2045	Secure Software Dev. (Lang.)	3
		Subtotal: 33

Computer Technology Electives (9 credits)

Choose 9 credits from the following:

CNG 1001	Networking Fundamentals	3
CNG 1031	Prin of Information Assurance	3
CNG 1032	Network Security Fundamentals	3
CSC 2017	Advanced Python Programming	3
CSC 2040	Java Programming	3
CSC 2041	Advanced Java Programming	3
CSC 2046	Mobile App Development :()	3
CSC 2080	Internship	3
CIS 2089	Capstone	3
CWB 1010	Intro to Web Authoring	3
CWB 2005	Client-side Scripting: (Soft)	3
CWB 2008	Web App Dev: (Dev Tool(s))	3
		Subtotal: 9

Upper Division Computer Technology Courses (43 credits)

CSC 3000	Advanced Computer Architecture	4
CSC 3020	Software Engineering Fund.	4
CSC 3022	Security Fund. and Databases	4
CSC 3024	Secure Code Vulnerabilities I	4
CSC 3026	SecureScript:Operating Systems	3
CSC 3028	Security Libraries in Prog Lan	4
CSC 4022	Secure Software Engineering	4
CSC 4024	Secr Code Vulnerabilities II	4
CSC 4026	Secure Cloud Programming	4
CSC 4028	Software Security Testing	4
CSC 4080	Internship	4
		Subtotal: 43
TOTAL CREDIT HOURS: 120		

Computer Science AS Degree with Designation

See Computer Science AS Designation Requirements (p. 60)

Computer Science Area of Study

For those planning to transfer to a four-year college or university to complete a major in Computer Science, consult with a faculty advisor before beginning this area of study.

Computer Science Area of Study

Requirements

Suggested Courses for Transfer

MAT 2410	Calculus I: GT-MA1	5
MAT 2420	Calculus II: GT-MA1	5
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
		Subtotal: 20

Additional GT Course Requirements

See AS Degree Requirements (p. 49)

Subtotal: 24

Approved AS Elective courses:

CSC 1060	Computer Science I: (Language)	4
CSC 1061	Computer Sci II: (Language)	4
CSC 2025	Computr Arch/Assembly Language	4
CSC Faculty- Approved Course	CSC Faculty-Approved Course	4
		Subtotal: 16
TOTAL CREDIT HOURS: 60		

Cosmetology

www.rrcc.edu/warrentech/cosmetology

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRCC students pursuing certain career and technical college degrees/certificates may take courses (on a space-available basis) at Warren Tech (WT), which is adjacent to the RRCC campus. You must have graduated from high school, received a GED, or attained the age of 21. You pay RRCC tuition and WT program fees and your coursework is recorded on your RRCC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start and end dates differ from those of RRCC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m. **For more information, see Warren Tech Students on page 12.**

The Cosmetology Program is designed to develop the skills necessary for entry-level employment in areas of hairstylist, esthetics (esthetician-skin care), and nail technology (manicurist).

Certificates

Esthetician (skin) (p. 98)

Hairstylist (p. 98)

Nail Technician (p. 98)

Degree: Associate of Applied Science

Cosmetology (p. 99)

Cosmetology Certificates

Esthetician (Skin) Certificate

The Esthetician Certificate (esthetics-skin care) is designed to develop the skills necessary for entry-level employment as an esthetician.

Certificate Requirements

Required Courses

COS 1050	Laws, Rules, and Regulations	1
COS 2050	Bus Mgmt/Per Skills/Ethics	1
EST 1010	Intro Skin Care	3
EST 1011	Intermediate Skin Care	2
EST 2010	Advanced Skin Care	2
EST 2011	Make-up	1
EST 2012	Hair Removal	3
EST 1060	Disinfection, Sanitation	2
EST 1061	Int Disinfection, Sanitation	3
EST 2060	Adv Disinfection, Sanitation	2
		TOTAL CREDIT HOURS: 20

Hairstylist Certificate

The Hairstylist Certificate is designed to develop the skills necessary for entry-level employment as a hairstylist.

Certificate Requirements

Required Courses

COS 1003	Intro Hair and Scalp	1
COS 2003	Inter I: Hair and Scalp	1
COS 1010	Intro Color	2
COS 1011	Inter I Color	2
COS 2010	Inter II Color	2
COS 2011	Adv Color	2
COS 1020	Intro Cutting	2
COS 1021	Inter I Cutting	2
COS 2020	Inter II Cutting	2
COS 2021	Adv Cutting	2
COS 1030	Intro Styling	2
COS 1031	Inter I Styling	2
COS 2030	Inter II Styling	2
COS 2031	Adv Styling	1
COS 1040	Intro to Chemical Texture	1
COS 1041	Intermed I: Chemical Texture	1
COS 2040	Intermediate II: Chem Texture	1
COS 2041	Advanced Chemical Texture	1
COS 1050	Laws, Rules, and Regulations	1
COS 2050	Bus Mgmt/Per Skills/Ethics	1
COS 1060	Intro to Infection Control	2
COS 1061	Inter I: Infection Control	1
COS 2060	Inter II: Infection Control	2
COS 2061	Adv Infection Control	1
COS 2062	Adv II Disinfect/Sanit/Safety	3
		TOTAL CREDIT HOURS: 40

Nail Technician Certificate

The Manicurist Certificate (nail technology) is designed to develop the skills necessary for entry-level employment as a manicurist.

Certificate Requirements

Required Courses

COS 1050	Laws, Rules, and Regulations	1
COS 2050	Bus Mgmt/Per Skills/Ethics	1
NAT 1008	Intro Manicure/Pedi/Arti Nails	3
NAT 1010	Intro to Nail Care	3
NAT 1011	Inter I Nail Care	2
NAT 1058	Inter Mani/Pedi/Arti Nails	2
NAT 1059	Inter Mani/Pedi/Arti Nails II	2
NAT 2008	Adv Mani/Pedi/Arti Nails	4
NAT 2010	Advanced Nail Care	2
		TOTAL CREDIT HOURS: 20

Cosmetology AAS Degree

Degree Requirements

Required Courses

Required certificate in Hairstyling (40 credits) as well as a certificate in either Manicurist (20 credits) or Esthetician (20 credits) to complete the AAS.

Subtotal: 60

General Education Requirements

Required Courses

ENG 1021	English Composition I: CO1 or COM (1000 or higher)	3
MAT 1140	Career Math	3

Courses from any two of the following three areas:

Courses must be (100 or higher)

Art and Humanities:

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences:

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences:

ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

Subtotal: 6

Electives

Electives from any of the above subject areas

CIS 1018	or Intro PC Applications	3
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Subtotal: 3

Subtotal: 12

TOTAL CREDIT HOURS: 75

Criminal Justice

www.rccc.edu/criminal-justice

The Criminal Justice Program is designed for those seeking a career in the Criminal Justice field. If you have a felony conviction, or any kind of criminal or significant driving record, you may not be employable in the criminal justice field. Information: 303-914-6463.

Degree: Associate of Arts

Criminal Justice AA Degree With Designation (p. 99)

Area of Study

Victim Assistance Area of Study (p. 99)

Criminal Justice AA Degree With Designation

For those planning to transfer to a four-year college or university to complete a major in Criminal Justice or Criminology. The associate of arts degree in criminal justice is articulated with all state criminal justice/criminology bachelor degree programs for those planning to continue in the criminal justice and criminology field. It is critical to consult with a criminal justice faculty advisor early in your college career to explore all your career options. You are urged to consult with a Criminal Justice advisor before beginning any program of study. Courses provide the basic preparation leading to criminal justice-related careers. Some courses might not be offered each semester. **Contact 303-914-6213 for advising.**

See Criminal Justice AA Designated Degree Requirements (p. 60)

Victim Assistance Area of Study

For those planning to transfer to a four-year college or university to complete a major in Psychology, Counseling Psychology, Social Work, or Human Services, with the intent of a career working with victims of crime and trauma.

Requirements

Suggested Courses for Transfer

CRJ 1010	Intro to Criminal Justice: SS3	3
CRJ 2057	Victimology	3
CRJ 1051	Domestic Violence	3
CRJ 1052	Sexual Assault	3
CRJ 2005	Principles of Criminal Law	3
CRJ 2025	Crisis Intervention	3

General Education Courses

See AA Degree Requirements (p. 46)

TOTAL CREDIT HOURS: 60

Culinary Arts

www.rccc.edu/culinary

This program is designed to prepare culinarians in hands-on, paid, full-time employment with an approved RMCC-sponsoring house. Related classes are taught at Warren Tech for five hours per week, 90 hours per semester. This VERY demanding six-semester (three-year) program will prepare and teach you to achieve certified culinarian status through the American Culinary Federation (ACF), while working full-time.

This program will earn students a journeyman certificate through the United States Department of Labor. This program is not designed as a traditional college class and does not offer specific sections, i.e. sauces or baking only.

Interested students MUST read detailed information on the RRCC culinary website prior to orientation sessions.

ALL pertinent information about the program is posted and up-to-date on the website. Please do not call for information on the program unless you have read the website in detail. Interested students must attend an orientation session as outlined on the website to receive a sponsoring house list.

Certificates

Introduction to Culinary Arts (p. 99)

Culinary Arts (p. 100)

Degree: Associate of Applied Science

Culinary Arts (p. 100)

Culinary Arts Certificates

Introduction to Culinary Arts Certificate

Certificate Requirements

Required Courses

CUA 1001	Food Safety and Sanitation	2
CUA 1021	Intro Food Pdn Prin/Practices	1
CUA 2078	Seminar	2

TOTAL CREDIT HOURS: 5

Culinary Arts Certificate

Certificate Requirements

Required Courses

CUA 1001	Food Safety and Sanitation	2
CUA 1021	Intro Food Pdn Prin/Practices	1
CUA 1022	Intro Stocks, Soups & Sauces	1
CUA 1023	Introduction to Garde Manger	1
CUA 1024	Vege Prep & Breakfast Cookery	1
CUA 1027	Soups, Sauces, and Consommés	3
CUA 1031	Starch/Pasta/Casserol/Grain	1
CUA 1032	Center of the Plate: Meat	1
CUA 1033	Ctr Plate Poultry/Fish/Seafd	1
CUA 1041	Baking: Principles/Ingredients	1
CUA 1042	BasicYeast-Raised Quick Breads	1
CUA 1043	Baking: Cake/Pies/Pastry/Cookey	1
CUA 1044	Baking Applications	1
CUA 1051	Baking: Intern Bread Prep	3
CUA 1052	Individual Fancy Dessert Pdn	3
CUA 1056	Nutrition/ Hospitality Prof	3
CUA 1057	Menu Planning	3
CUA 1080	Internship	4
CUA 1082	Internship	4
CUA 2010	Advanced Cuisine and Garde Manger	4
CUA 2055	Supervis/Hospitality Industry	3
CUA 2081	Internship	4

TOTAL CREDIT HOURS: 47

Culinary Arts Degrees

Culinary Arts AAS Degree

Degree Requirements

Required Courses

CUA 1001	Food Safety and Sanitation	2
CUA 1021	Intro Food Pdn Prin/Practices	1
CUA 1022	Intro Stocks, Soups & Sauces	1
CUA 1023	Introduction to Garde Manger	1
CUA 1024	Vege Prep & Breakfast Cookery	1
CUA 1027	Soups, Sauces, and Consommés	3
CUA 1031	Starch/Pasta/Casserol/Grain	1
CUA 1032	Center of the Plate: Meat	1
CUA 1033	Ctr Plate Poultry/Fish/Seafd	1
CUA 1041	Baking: Principles/Ingredients	1
CUA 1042	BasicYeast-Raised Quick Breads	1
CUA 1043	Baking: Cake/Pies/Pastry/Cookey	1
CUA 1044	Baking Applications	1
CUA 1051	Baking: Intern Bread Prep	3
CUA 1052	Individual Fancy Dessert Pdn	3
CUA 1056	Nutrition/ Hospitality Prof	3
CUA 1057	Menu Planning	3
CUA 1080	Internship	4
CUA 1082	Internship	4
CUA 2010	Advanced Cuisine and Garde Manger	4
CUA 2055	Supervis/Hospitality Industry	3
CUA 2081	Internship	4

Subtotal: 47

General Education Courses (15 credits)

Communication (3 credits)

ENG 1021	English Composition I: CO1 or COM (1000 or higher)	3
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Subtotal: 3

Mathematics (3 credits)

MAT 1140	Career Math or higher	3
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Subtotal: 3

Credit from any two of the following three areas (6 credits)

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (1000 and above)

AGR, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

Subtotal: 6

Electives from any of the following areas (3 credits)

Communication (1000 and above)

ENG, COM

Mathematics (1000 and above)

MAT

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (1000 and above)

ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

Subtotal: 3

Subtotal: 15

TOTAL CREDIT HOURS: 62

Dance

See Theatre Arts and Dance (p. 139)

Dental Assisting

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRCC students pursuing certain career and technical college degrees/certificates may take courses (on a space-available basis) at Warren Tech (WT), which is adjacent to the RRCC campus. You must have either graduated from high school, received a GED, or attained the age of 21. You pay RRCC tuition and WT program fees and your coursework is recorded on your RRCC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start and end dates differ from those of RRCC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m. **For more information, see Warren Tech Students**

Certificate

Dental Assistant (p. 100)

Dental Assistant Certificate

This one-year program is designed to provide you with the basic and skill training needed for this profession. You will receive a Warren Tech certificate of successful completion that will allow you entry to the Dental Assisting field.

Adult students are encouraged to apply. All students must complete all courses or two semesters of courses as well as the off-site internship at a local dental office to complete the certificate.

Certificate Requirements**Required Courses****Semester 1:**

(Semester 1 courses must be taken first in Fall semester.)

DEA 1001	Dental Terminology	1
DEA 1021	Principles/Clinical Practice	3
DEA 1022	Specialties in Dentistry	2
DEA 1011	Intro to Dental Practices	1
DEA 1012	Dental Science I	3
DEA 1013	Dental Science II	3
DEA 1015	Infection Control	3
Subtotal:		16

Semester 2:

(Semester 2 courses can only be taken after semester 1 has been successfully completed. Offered only in the Spring semester.)

DEA 1023	Dental Materials I	3
DEA 1024	Dental Radiography	3
DEA 1016	Medical Emerg in Dental Office	2
DEA 1031	Prevent/Nutrition Dentistry	3
DEA 2087	Cooperative Education	2
Subtotal:		13

TOTAL CREDIT HOURS: 29**Diagnostic Medical Sonography**

See Sonography (p. 138)

Early Childhood Educationwww.rccc.edu/early-childhood-education

All Early Childhood Education (ECE) degrees and certificates require you to take the placement test before your first semester. You must earn a C or higher in all ECE courses to graduate with a degree or certificate in Early Childhood. You must complete a criminal background check using <http://cccs.castlebranch.com> online background check.

Certificates

- Early Childhood Teacher Certificate (p. 101)
- Early Childhood Director Certificate (p. 102)
- Paraprofessional Educator Certificate (p. 102)
- Infant/Toddler Early Childhood Teacher Certificate (p. 101)
- Early Childhood Assistant Teacher (p. 101)
- Early Childhood Education (p. 101)

Degree: Associate of Applied Science

Early Childhood Education (p. 102)

Degree: Associate of Arts

Early Childhood Teacher Education AA Degree With Designation (p. 102)

Early Childhood Education Certificates**Early Childhood Education Certificate****Certificate Requirements****Requirements List**

ECE 1011	Intro to Early Childhood Education	3
ECE 1031	Guidance Strategies for Young Children	3
ECE 1045	Intro to ECE Techniques	3

ECE 2381	ECE Child Growth & Development	3
TOTAL CREDIT HOURS:		12

Infant/Toddler Early Childhood Teacher Certificate

All Early Childhood Education (ECE) degrees and certificates require you to take the placement test before your first semester. You must earn a C or higher in all ECE courses to graduate with a degree or certificate in Early Childhood. You must complete a criminal background check using <http://cccs.castlebranch.com> online background check.

Certificate Requirements**Requirements List**

ECE 1011	Intro to Early Childhood Education	3
ECE 1031	Guidance Strategies for Young Children	3
ECE 1111	Infant/Toddler Theory/Practice	3
ECE 1125	Intro to Infant/Toddler Lab Techniques	3
ECE 2615	Exceptional Child Lab	3
ECE Course	Any 3 credit ECE Course	3

TOTAL CREDIT HOURS: 18**Early Childhood Assistant Teacher Certificate**

Completing this program provides you with the entry-level requirements for working in early care and education settings as an assistant early childhood assistant teacher with no verified work experience. See current Rules regulating Child Care Facilities for a full list of requirements for early childhood teacher qualifications.

Certificate Requirements**Requirements List**

ECE 1011	Intro to Early Childhood Education	3
ECE 1031	Guidance Strategies for Young Children	3

Electives List

Choose an ECE course for 3 credits

Subtotal: 3**TOTAL CREDIT HOURS: 6****Early Childhood Teacher Certificate****Certificate Requirements****Requirements List**

ECE 1011	Intro to Early Childhood Education	3
ECE 1045	Intro to ECE Techniques	3
ECE 1031	Guidance Strategies for Young Children	3
ECE 2621	Curriculum Methods/Techniques	3
ECE 2381	ECE Child Growth & Development	3

Subtotal: 15**Electives List**

Any 3 credit ECE course. Recommend ECE 2601

ECE 2601	The Exceptional Child	3
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Subtotal: 3**TOTAL CREDIT HOURS: 18**

Early Childhood Director Certificate

Certificate Requirements

Requirements List

ECE 1011	Intro to Early Childhood Education	3
ECE 1045	Intro to ECE Techniques	3
ECE 1031	Guidance Strategies for Young Children	3
ECE 1111	Infant/Toddler Theory/Practice	3
ECE 2051	ECE Nutrition/Health/Safety	3
ECE 2621	Curriculum Methods/Techniques	3
ECE 2381	ECE Child Growth & Development	3
ECE 2401	Admin of ECE Programs	3
ECE 2411	Admin:Human Relations ECE	3
ECE 2601	The Exceptional Child	3

TOTAL CREDIT HOURS: 30

Paraprofessional Educator Certificate

Completing this program prepares you to serve in elementary education classroom settings as an instructional paraprofessional educator. Upon completion of these classes, you will have educational skills to support and reinforce teacher prepared lesson plans for individual or small groups of students, and supervise/manage student behaviors. This certificate may apply toward required coursework in the AA-Early Childhood Teacher Education or AA-Elementary Teacher Education degree programs.

Certificate Requirements

Requirements List

ECE 1031	Guidance Strategies for Young Children	3
ECE 2101	Working w/Families & Communs	3
EDU 2211	Introduction to Education	3
ECE 2381	ECE Child Growth & Development	3
EDU 2088	Practicum II	1
EDU 2341	Multicultural Education	3
ENG 1021	English Composition I: CO1	3
	or	
ENG 1031	Technical Writing I: CO1	3
MAT 1240	Math for Liberal Arts: MA1	4

Subtotal: 23

Electives List

Choose one 3-credit elective:

EDU 2401	Teaching Exceptional Learners	3
	or	
ECE 2601	The Exceptional Child	3

Subtotal: 3

TOTAL CREDIT HOURS: 26

Early Childhood Education Degrees

Early Childhood Education AAS Degree

This program prepares you to work as a professional in a variety of capacities in early childhood education. Completing this program prepares you for teaching and/or administrative positions in early care and education settings.

Degree Requirements

Requirements List

ECE 1011	Intro to Early Childhood Education	3
ECE 1031	Guidance Strategies for Young Children	3
ECE 1045	Intro to ECE Techniques	3
ECE 1111	Infant/Toddler Theory/Practice	3
ECE 1125	Intro to Infant\Toddler Lab Techniques	3
ECE 2051	ECE Nutrition/Health/Safety	3

ECE 2101	Working w/Families & Communs	3
ECE 2301	Obs. and Assess. in ECE	2
ECE 2315	EC Obs. and Assess. Techniques	1
ECE 2381	ECE Child Growth & Development	3
ECE 2401	Admin of ECE Programs	3
ECE 2411	Admin:Human Relations ECE	3
ECE 2601	The Exceptional Child	3
ECE 2621	Curriculum Methods/Techniques	3
ECE 2651	Early Language and Literacy	3
Electives	ECE or EDU course	3

Subtotal: 45

General Education Requirements (15 credits)

Requirements List

Communication (3 credits)

ENG 1021	English Composition I: CO1	3
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Subtotal: 3

Mathematics (3 credits)

MAT 1140	Career Math	3
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Subtotal: 3

Credit from any two of the following three areas (6 credits)

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (1000 and above)

AGR, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

Subtotal: 6

Specific Program Requirement

CIS 1018	Intro PC Applications	3
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Subtotal: 3

Subtotal: 15

TOTAL CREDIT HOURS: 60

Early Childhood Teacher Education AA Degree With Designation

If you plan to transfer to a four-year public college or university to complete a degree with an emphasis in Early Childhood Teacher Education, including birth to grade 3, you should complete the following courses. These courses provide the basic preparation leading to early childhood teacher licensure and professional early childhood education careers.

Consult with the ECE advisor before beginning this program of study.

Early Childhood Teacher Education AA Designated Degree (p. 61)

Economics

www.rccc.edu/economics

Economics is the study of how society feeds, clothes, houses, and otherwise materially supports itself. It answers the fundamental questions of How? What? and For whom? Graduates work in business, government, and education in very colorful and varied careers, and they are able to contribute in many ways to answering these basic questions that confront all societies and individuals.

Degree: Associate of Arts

Economics AA Degree With Designation (p. 62)

Electricity Commercial-Industrial-Residential

www.rccc.edu/electrical

The Electrical program is unique in that it covers an array of employment opportunities in the electrical field. Program is designed for students wanting to develop entry-level skills and knowledge needed for residential, commercial, and industrial wiring, blueprint reading, estimating, and national electrical codes. Important safety practices are strongly emphasized while working on electrical circuits and in the use of test equipment and hand and power tools are explored. This program prepares you for the many career opportunities in the electrical industry. Motor controls and programmable controllers let you design and build control systems. The electrical installation courses use the latest techniques according to the National Electrical Code. The electrical code classes are especially useful as preparation for state license and renewal. This program is excellent for electricians, engineers, firefighters, building department inspectors, and maintenance personnel. This program uses an extensive lab environment for important hands-on experience, which minimizes the possibility of technological obsolescence.

Industrial Control & Instrumentation technicians maintain, repair, and troubleshoot mechanisms in a wide variety of industries applications. As a technician, you will repair, maintain, and install sophisticated systems relative to the process or manufacturing industries. This program is designed to provide you with a wide variety of electrical courses to prepare you for a job in the electrical industry. The need for trained electrical technicians continues to climb in a variety of industries, including; construction, manufacturing, power plants, oil and gas production facilities, mining operations, and chemical processing plants. **For advising, please call 303-914-6509 or 303-914-6510.**

Effective January 1, 2011, during the last four years of training, apprenticeship, or practical experience in wiring for, installing, and repairing electrical apparatus and equipment for electric light, heat, and power, **at least two hundred eighty-eight hours** or five EIC classes, of training in safety, the national electrical code and its applications, and any other training required by the board that is provided by an accredited college or university, an established industry training program, or any other provider whose training is conducted in compliance with rules promulgated by the board, in collaboration with established industry training programs and industry representatives.

Related course work may be found under: Air Conditioning, Heating, and Refrigeration (p. 82)

Certificates

- 288 Hour Journeyman License (p. 103)
- Electrical Installation (p. 103)
- National Electrical Code (p. 103)
- Electrical Codes and Standards (p. 103)
- Residential Construction Electrician (p. 103)
- Construction Electrician (p. 104)
- Advanced Construction Electrician (p. 104)
- Maintenance Electrician (p. 104)
- Introduction to Instrumentation and Controls Technician (p. 104)
- Advanced Instrumentation and Controls Technician (p. 104)
- Advanced Maintenance Electrician (p. 104)
- Post-Degree Specialization for Advanced Construction Electrician (p. 104)
- Post-Degree Specialization for Advanced Maintenance Electrician (p. 105)
- Industrial Network Instrumentation (p. 105)
- Electrician State CEU Renewal (p. 105)

Degrees: Associate of Applied Science

- Construction Electrician (p. 105)
- Maintenance Electrician (p. 105)
- Construction Electrician/IBEW/NECA (p. 106)
- Power Technology (p. 106)
- Industrial Control & Instrumentation Technology (p. 106)

Electricity Commercial/Industrial/Residential Certificates

288 Hour Journeyman License Certificate

Certificate Requirements

Required Courses

EIC 1860	National Electrical Code I	4
EIC 1861	National Electrical Code II	4
EIC 1272	Electrical Code Calculations	4
EIC 1211	Electrical Installations I	4
EIC 1212	Electrical Installations II	4

TOTAL CREDIT HOURS: 20

Electrical Installation Certificate

Relating to AAS/Construction Electrician

Certificate Requirements

Required Courses

EIC 1000	Electrical Const & Planning	4
EIC 1211	Electrical Installations I	4
EIC 1212	Electrical Installations II	4
EIC 1860	National Electrical Code I	4

TOTAL CREDIT HOURS: 16

National Electrical Code Certificate

Relating to AAS/Construction Electrician

Certificate Requirements

Required Courses

EIC 1860	National Electrical Code I	4
EIC 1861	National Electrical Code II	4
EIC 1272	Electrical Code Calculations	4

TOTAL CREDIT HOURS: 12

Electrical Codes and Standards Certificate

Relating to AAS/Construction Electrician

Certificate Requirements

Required Courses

EIC 1860	National Electrical Code I	4
EIC 1861	National Electrical Code II	4
EIC 1272	Electrical Code Calculations	4
EIC 2811	IECC Energy Conservation Code	4

TOTAL CREDIT HOURS: 16

Residential Construction Electrician Certificate

Relating to AAS/Construction Electrician

Certificate Requirements

Required Courses

EIC 1001	Electrical Print Reading	4
EIC 1000	Electrical Const & Planning	4
EIC 1211	Electrical Installations I	4

EIC 1860	National Electrical Code I	4
EIC 1202	DC Circuit Fundamentals	4
EIC 1203	AC Circuit Fundamentals	4
TOTAL CREDIT HOURS:		24

Construction Electrician Certificate

Relating to AAS/Construction Electrician

Certificate Requirements

Required Courses

EIC 1001	Electrical Print Reading	4
EIC 1000	Electrical Const & Planning	4
EIC 1211	Electrical Installations I	4
EIC 1212	Electrical Installations II	4
EIC 1860	National Electrical Code I	4
EIC 1861	National Electrical Code II	4
EIC 1202	DC Circuit Fundamentals	4
EIC 1203	AC Circuit Fundamentals	4
EIC 1272	Electrical Code Calculations	4
TOTAL CREDIT HOURS:		36

Advanced Construction Electrician Certificate

Relating to AAS/Construction Electrician

Certificate Requirements

Construction Electrician Certificate on page 98 or instructor's approval

Required Courses

EIC 1001	Electrical Print Reading	4
EIC 1103	Electrical Safety Requirements	1
EIC 1260	Instruments & Measurements	4
EIC 1270	Electrical Maintenance	4
EIC 2811	IECC Energy Conservation Code	4
EIC 2817	Electrical Estimating/Costing	4
EIC 2320	Industrial Electrical Controls	4
EIC 2323	Advanced Industrial Controls	4
TOTAL CREDIT HOURS:		33

Maintenance Electrician Certificate

Relating to AAS/Maintenance Electrician:

Certificate Requirements

Required Courses

EIC 1211	Electrical Installations I	4
EIC 1212	Electrical Installations II	4
EIC 1860	National Electrical Code I	4
EIC 1861	National Electrical Code II	4
EIC 1202	DC Circuit Fundamentals	4
EIC 1203	AC Circuit Fundamentals	4
EIC 1270	Electrical Maintenance	4
EIC 2320	Industrial Electrical Controls	4
EIC 2325	Programmable Controllers	4
TOTAL CREDIT HOURS:		36

Introduction to Instrumentation & Control Systems Technician Certificate

Relating to AAS/Maintenance Electrician

Certificate Requirements

Required Courses

EIC 2320	Industrial Electrical Controls	4
EIC 2325	Programmable Controllers	4
EIC 2322	Instrument & Process Control I	4
TOTAL CREDIT HOURS:		12

Advanced Instrumentation and Controls Technician Certificate

Relating to AAS/Maintenance Electrician

Certificate Requirements

Required Courses

EIC 2323	Advanced Industrial Controls	4
EIC 2326	PLC Controllers Advanced	4
EIC 2330	Instrument/Process Control II	4
EIC 2340	SCADA	4
TOTAL CREDIT HOURS:		16

Advanced Maintenance Electrician Certificate

Relating to AAS/Maintenance Electrician:

Certificate Requirements

Maintenance Electrician Certificate (p. 104) or advisor approval

Required Courses

EIC 1001	Electrical Print Reading	4
EIC 1260	Instruments & Measurements	4
EIC 1272	Electrical Code Calculations	4
EIC 2322	Instrument & Process Control I	4
EIC 2323	Advanced Industrial Controls	4
EIC 2326	PLC Controllers Advanced	4
EIC 2330	Instrument/Process Control II	4
TOTAL CREDIT HOURS:		32

Post-Degree Specialization for Advanced Construction Electrician Certificate

Relating to AAS/Construction Electrician.

Certificate Requirements

Construction Electrician AAS degree (p. 104) or instructor's approval

Required Courses

EIC 1001	Electrical Print Reading	4
EIC 1260	Instruments & Measurements	4
EIC 2340	SCADA	4
TOTAL CREDIT HOURS:		16

Post-Degree Specialization for Advanced Maintenance Electrician Certificate

Relating to AAS/Maintenance Electrician.

Certificate Requirements

Maintenance Electrician AAS degree (p. 104) emphasis or advisor approval

Required Courses

EIC 2811	IECC Energy Conservation Code	4
EIC 2323	Advanced Industrial Controls	4
EIC 2340	SCADA	4
TOTAL CREDIT HOURS:		16

Industrial Network Instrumentation Certificate

Certificate Requirements

Required Courses

EIC 2322	Instrument & Process Control I	4
EIC 2330	Instrument/Process Control II	4
EIC 2340	SCADA	4
TOTAL CREDIT HOURS:		12

Electrician State CEU Renewal Certificate

Certificate Requirements

Required Courses

EIC 1860	National Electrical Code I	4
TOTAL CREDIT HOURS:		4

Electricity Commercial/Industrial/Residential Degrees

Construction Electrician AAS Degree

This degree can eliminate up to one year of apprenticeship hours required by the State of Colorado to become a licensed electrician.

Degree Requirements

Required Courses

EIC 1000	Electrical Const & Planning	4
EIC 1211	Electrical Installations I	4
EIC 1212	Electrical Installations II	4
EIC 1860	National Electrical Code I	4
EIC 1861	National Electrical Code II	4
EIC 1202	DC Circuit Fundamentals	4
EIC 1203	AC Circuit Fundamentals	4
Subtotal:		28

Elective Courses (Choose 18 credits from the list below)

Other courses as approved by Electrical Department Advisor.

EIC 1001	Electrical Print Reading	4
EIC 1201	Basics of AC & DC Electricity	4
EIC 1103	Electrical Safety Requirements	1
EIC 1002	Electrical Principles and Appl	3
EIC 1812	National Electric Code 2011	1.5
EIC 1034	Life Safety Code (Nfpa 101)	1.5
EIC 1260	Instruments & Measurements	4

EIC 1270	Electrical Maintenance	4
EIC 1272	Electrical Code Calculations	4
EIC 2811	IECC Energy Conservation Code	4
EIC 2817	Electrical Estimating/Costing	4
EIC 2320	Industrial Electrical Controls	4
EIC 2221	Trouble Shooting Control Cir	1.5
EIC 2322	Instrument & Process Control I	4
EIC 2323	Advanced Industrial Controls	4
EIC 2324	Understanding PLC's	1.5
EIC 2029	AC & DC Variable Speed Drive	1.5
EIC 2330	Instrument/Process Control II	4
EIC 2740	Fire Alarm Fundamentals	4
EIC 2061	Project Management: Electrical	4
EIC 2873	RCDD Exam Prep Course	0
Subtotal:		18

General Education Courses

AAS Degree Requirements (p. 55)

Subtotal: 15

TOTAL CREDIT HOURS: 61

Maintenance Electrician AAS Degree

This degree can eliminate up to one year of apprenticeship hours required by the State of Colorado to become a licensed electrician.

Degree Requirements

Required Courses

EIC 1211	Electrical Installations I	4
EIC 1212	Electrical Installations II	4
EIC 1202	DC Circuit Fundamentals	4
EIC 1203	AC Circuit Fundamentals	4
EIC 1270	Electrical Maintenance	4
EIC 1860	National Electrical Code I	4
EIC 2320	Industrial Electrical Controls	4
EIC 2325	Programmable Controllers	4
Subtotal:		32

Elective Courses (Choose 14 credits from the list below)

EIC 1000	Electrical Const & Planning	4
EIC 1001	Electrical Print Reading	4
EIC 1201	Basics of AC & DC Electricity	4
EIC 1103	Electrical Safety Requirements	1
EIC 1002	Electrical Principles and Appl	3
EIC 1812	National Electric Code 2011	1.5
EIC 1034	Life Safety Code (Nfpa 101)	1.5
EIC 1861	National Electrical Code II	4
EIC 1202	DC Circuit Fundamentals	4
EIC 1203	AC Circuit Fundamentals	4
EIC 1260	Instruments & Measurements	4
EIC 1272	Electrical Code Calculations	4
EIC 2811	IECC Energy Conservation Code	4
EIC 2817	Electrical Estimating/Costing	4
EIC 2221	Trouble Shooting Control Cir	1.5
EIC 2322	Instrument & Process Control I	4
EIC 2323	Advanced Industrial Controls	4
EIC 2324	Understanding PLC's	1.5
EIC 2326	PLC Controllers Advanced	4
EIC 2029	AC & DC Variable Speed Drive	1.5
EIC 2330	Instrument/Process Control II	4
EIC 1220	Electric Motors	1.5
EIC 2740	Fire Alarm Fundamentals	4
EIC 2061	Project Management: Electrical	4
EIC 2873	RCDD Exam Prep Course	0
Subtotal:		14

General Education Courses

AAS Degree Requirements (p. 55)

Subtotal: 15

TOTAL CREDIT HOURS: 61

Construction Electrician IBEW/NECA AAS Degree

Combine your four or five years of apprenticeship with general education classes at RRCC for an associate of applied science degree via an articulation agreement between IBEW/NECA and RRCC.

The objective of the program is to allow members who have served their apprenticeship program through the National Joint Apprenticeship (NJATC) to earn associate's degrees.

This program allows you to combine your excellent trade skills with your academic skills. Upon completion of the IBEW/NECA NJATC apprenticeship program, RRCC will grant 43 credits toward an AAS degree. The degree requires a total of 61 credits, of which 18 must be taken at RRCC or through RRCC Online.

You must show proof of completion of IBEW/NECA Wireman or Outside Lineman NJATC programs.

Power Technology AAS Degree

This associate of applied science degree is available for only those who have completed or are currently enrolled in a power utility-based apprenticeship.

RRCC's Electrical Program will grant 43 college credits toward an AAS degree. The degree requires a total of 61 credits, of which 18 must be taken at RRCC or through RRCC Online.

By using your apprentice training and taking only six additional classes, you may obtain a degree online, at home, and at times of your choosing. Consult with an advisor for details.

Emphasis determined by the apprenticeship program completed:

- Line Technician
- Substation Electrician
- Meter Specialist
- Apparatus Electrician
- Instrument and Control Specialist
- Electrician Specialist
- Mechanic Specialist
- Power Plant Operator
- Field Engineering Specialist
- Relay and Control Specialist
- Utility Engineering Standards Specialist Tech

Industrial Control and Instrumentation Technology AAS Degree

Degree Requirements

Required Courses

EIC 1103	Electrical Safety Requirements	1
EIC 1860	National Electrical Code I	4
EIC 1202	DC Circuit Fundamentals	4
EIC 1203	AC Circuit Fundamentals	4
EIC 1260	Instruments & Measurements	4
EIC 1270	Electrical Maintenance	4
EIC 2320	Industrial Electrical Controls	4
EIC 2322	Instrument & Process Control I	4
EIC 2323	Advanced Industrial Controls	4
EIC 2325	Programmable Controllers	4
EIC 2326	PLC Controllers Advanced	4
EIC 2330	Instrument/Process Control II	4
EIC 2340	SCADA	4

Subtotal: 49

General Education Courses

AAS Degree Requirements (p. 55)

Subtotal: 15

TOTAL CREDIT HOURS: 64

Elementary Education

See Teacher Education (p. 139)

Emergency Management and Planning

www.rrcc.edu/emergency-management-planning

Certificate

Emergency Management and Planning (p. 106)

Degree

Emergency Management and Planning (p. 106)

Emergency Management and Planning Certificate

The certificate program is geared toward current emergency management practitioners who want to upgrade their skills.

Certificate Requirements

Required Courses

Choose 10 out of the 11 listed courses below for a total of 30 credits:

EMP 1001	Emergency Management	3
EMP 1005	Public Safety Applications	3
EMP 1006	Exercise Design Evaluation	3
EMP 1007	Emerg Op Center & Comm	3
EMP 1009	Incident Command Systems	3
EMP 2040	Leadership and Influence	3
EMP 2042	Effective Communication	3
EMP 2044	Developing Volunteer Resources	3
EMP 2047	Decision Making in a Crisis	3
EMP 2050	Business Emergency Management	3
EMP 2091	Public Information Officer	3

TOTAL CREDIT HOURS: 30

Emergency Management and Planning AAS Degree

Completion of this curriculum prepares you for:

- Entry into a career in emergency management and planning.
- Promotion within an emergency service agency or the private sector.
- Advancement to a four-year college in pursuit of a Bachelor's of Science degree in Public Administration with emphasis in Emergency Management and Planning.

Emphasis is placed on modern emergency management and planning techniques as currently practiced by the public and private sectors. The ability to perform essential work in a disaster requires unique skills and knowledge of emergency management and planning. These skills are covered in depth. The Federal Emergency Management Agency (FEMA) recognizes this program as one of the pioneering programs in the country. The emergency management and planning courses are available over the Internet, providing flexibility and avoiding lengthy and costly travel. It is highly recommended that anyone new to the field of Emergency Management start by taking EMP 1001 Emergency Management and EMP 1009 Incident Command Systems.

Information: www.rrcc.edu/emergency-management-planning

Degree Requirements

Required Courses

Choose 10 out of the 11 listed courses below for a total of 30 credits

EMP 1001	Emergency Management	3
EMP 1005	Public Safety Applications	3
EMP 1006	Exercise Design Evaluation	3
EMP 1007	Emerg Op Center & Comm	3
EMP 1009	Incident Command Systems	3
EMP 2040	Leadership and Influence	3
EMP 2042	Effective Communication	3
EMP 2044	Developing Volunteer Resources	3
EMP 2047	Decision Making in a Crisis	3
EMP 2050	Business Emergency Management	3
EMP 2091	Public Information Officer	3
Subtotal: 33		

General Education Courses (15 credits)

Communication (3 credits)

ENG 1021	English Composition I: CO1	3
Subtotal: 3		

Mathematics (3 credits)

MAT 1140	Career Math or higher	3
Subtotal: 3		

Credit from any two of the following three areas (6 credits)

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (1000 and above)

AGR, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

Subtotal: 6

Credit from any of the following areas (3 credits)

Communication (1000 and above)

ENG, COM

Mathematics (1000 and above)

MAT

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Sciences (1000 and above)

ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC, or the CIS 1018 Intro PC Applications course.

Subtotal: 3

Subtotal: 15

Electives (12 credits)

Elective Courses

Credit from the recommended following areas (1000 level or higher):

EMP, EMS, FST, LEA, CRJ, GIS, CIS, BUS, MAN, PRA

Subtotal: 12

TOTAL CREDIT HOURS: 60

Emergency Medical Services

www.rccc.edu/emergency-medical-services

This program is designed to train workers in the field of emergency medical service. It begins with an entry-level EMT certificate program and includes an Advanced EMT certificate program, a Paramedic certificate program, and an associate of applied science degree in both Emergency Medical Technology and Paramedicine. Consult the website early in your college career to explore all your educational options. A grade of C or higher must be achieved in all courses to graduate. You must complete a criminal background check and meet other requirements prior to enrolling in this program.

Please visit our website www.rccc.edu/emergency-medical-services for a list of requirements and enrollment instructions for all EMS programs.

Certificates

- Emergency Medical Technician (p. 107)
- Advanced Emergency Medical Technician (p. 107)
- Paramedic (p. 108)

Degrees: Associate of Applied Science

- Emergency Medical Technology (p. 108)
- Paramedicine (p. 108)

Emergency Medical Services Certificates

Emergency Medical Technician Certificate

This program prepares you to sit for the National Registry exam, which is required for Colorado state certification. Once certified, the graduate is eligible for entry-level employment in the emergency medical services system. This program is the first semester of the emergency medical technology degree.

Certificate Requirements

Required Courses

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
TOTAL CREDIT HOURS: 12		

Advanced Emergency Medical Technician Certificate

This program prepares you to sit for the National Registry practical and written Advanced EMT certification exams, which are required for Colorado state certification. Once certified, the graduate is eligible for additional employment opportunities in the Emergency Medical Services system. Completion of the program also assists graduates to gain acceptance into a Paramedic training program and is the second semester of the Emergency Medical Technology degree.

Certificate Requirements

Required Courses

EMS 1127	AEMT Special Considerations	2
EMS 1129	AEMT Pharmacology	1
EMS 1030	EMT Intravenous Therapy	2
EMS 1125	AEMT Fundamentals	2
EMS 1133	AEMT Medical Emergencies	2
EMS 1135	AEMT Trauma Emergencies	2

EMS 1071	AEMT Clinical Internship	2
		TOTAL CREDIT HOURS: 13

Paramedic Certificate

This program prepares you to sit for the National Registry practical and written certification exams, which are required for Colorado state certification. Once certified, the graduate is eligible for employment in the Emergency Medical Services system.

Certificate Requirements

Required Courses

EMS 2025	Paramedic Practice	3
EMS 2026	Paramedic Practice - Lab	2
EMS 2027	Paramedic Spec Considerations	3
EMS 2028	Special Considerations Lab	2
EMS 2029	Paramedic Pharmacology	3
EMS 2030	Paramedic Pharmacology Lab	2
EMS 2031	Paramedic Cardiology	5
EMS 2032	Paramedic Cardiology Lab	1
EMS 2033	Paramedic Medical Emergencies	4
EMS 2034	Medical Emergencies Lab	1
EMS 2035	Paramedic Trauma Emergencies	4
EMS 2036	Trauma Emergencies Lab	1
EMS 2037	Paramedic Internship Prep	2
EMS 2080	Internship I:	6
EMS 2081	Paramedic Internship II	6
BIO 1006	Basic Anatomy and Physiology	4
		TOTAL CREDIT HOURS: 49

Emergency Medical Services Degrees

Emergency Medical Technology AAS Degree

This program assists in advancing a graduate's career in the EMS system and also prepares them to enter a paramedic course of study.

Degree Requirements

Required Courses

EMS 1021	EMT Fundamentals	3
EMS 1022	EMT Medical Emergencies	4
EMS 1023	EMT Trauma Emergencies	2
EMS 1024	EMT Special Considerations	2
EMS 1127	AEMT Special Considerations	2
EMS 1129	AEMT Pharmacology	1
EMS 1125	AEMT Fundamentals	2
EMS 1132	EMS IV / IO Therapy	2
EMS 1133	AEMT Medical Emergencies	2
EMS 1135	AEMT Trauma Emergencies	2
EMS 1138	Basic EMS Simulation Lab	3
EMS 1140	Advanced EMS Simulation Lab	3
EMS 1070	EMT Clinical	1
EMS 1071	AEMT Clinical Internship	2
EMS 1078	EMS Seminar	3
EMS 1081	EMS Internship I	2
EMS 1082	EMS Internship II	5
EMS 2070	Clinical: EMS Intermediate	3
EMS 2079	Seminar	3
		Subtotal: 47

General Education Courses

Communication (3 credits)

ENG 1021	English Composition I: CO1 or higher	3
ENG 1031	Technical Writing I: CO1 recommended	

Mathematics (3 credits)

MAT 1140	Career Math or higher	3
MAT 1340	College Algebra is recommended	

Natural and Physical Sciences (3 credits)

BIO 1006	Basic Anatomy and Physiology	4
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Credit from one of the following areas (3 credits)

Arts and Humanities

ART, FRE, GER, HUM, LIT, MUS, PHI, SPA, THE,

Social and Behavioral Sciences

ANT, ECO, HIS, POS, PSY, SOC

Subtotal: 3

Subtotal: 13

Electives (3 credits)

Electives from any of the following areas

Communication (1000 and above)

ENG, COM

Mathematics (1000 and above)

MAT

Arts and Humanities (1000 and above)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences (1000 and above)

AGR, AST, BIO, CHE, ENV, GEY, PHY, SCI

Social and Behavioral Sciences (1000 and above)

ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC, or the CIS 1018 Intro PC Applications course

Subtotal: 3

TOTAL CREDIT HOURS: 63

Paramedicine AAS Degree

This program assists in advancing a graduate's career in the EMS system. For admission into the Paramedic program, please go to the St. Anthony's Hospital EMS Training website at: www.sahems.org

Degree Requirements

Required Courses

EMS 2025	Paramedic Practice	3
EMS 2026	Paramedic Practice - Lab	2
EMS 2027	Paramedic Spec Considerations	3
EMS 2028	Special Considerations Lab	2
EMS 2029	Paramedic Pharmacology	3
EMS 2030	Paramedic Pharmacology Lab	2
EMS 2031	Paramedic Cardiology	5
EMS 2032	Paramedic Cardiology Lab	1
EMS 2033	Paramedic Medical Emergencies	4
EMS 2034	Medical Emergencies Lab	1
EMS 2035	Paramedic Trauma Emergencies	4
EMS 2036	Trauma Emergencies Lab	1
EMS 2037	Paramedic Internship Prep	2
EMS 2080	Internship I:	6
EMS 2081	Paramedic Internship II	6
		Subtotal: 45

General Education Courses

Communication (3 credits)

ENG 1021	English Composition I: CO1 or higher	3
ENG 1031	Technical Writing I: CO1 recommended	

Mathematics (3 credits)

MAT 1140	Career Math or higher	3
MAT 1340	College Algebra is recommended	

Natural and Physical Sciences (8 credits)

BIO 2101	Human Anatomy & Phys I w/Lab: SC1	4
BIO 2102	Human Anatomy & Phys II w/Lab: SC1	4

Credit from one of the following areas (3 credits)

Arts and Humanities

ART, FRE, GER, HUM, LIT, MUS, PHI, SPA, THE,

Social and Behavioral Sciences

ANT, ECO, HIS, POS, PSY, SOC

Subtotal: 17

TOTAL CREDIT HOURS: 62

Engineering - Pre-Engineering

www.rccc.edu/engineering-preparatory

For those planning to transfer to a four-year college or university to complete a major in Engineering. Consult with a faculty advisor before beginning this degree or area of study. If you plan to transfer to a college in Colorado, there is additional information about the Statewide Articulation Agreement for Engineering at the Colorado Department of Education's website. These courses provide the basic preparation leading to engineering-related careers.

Degree: Associate of Science

Associate of Engineering Degree – Transfer track to Colorado State University (p. 109)

Associate of Engineering Degree – Transfer track to Colorado School of Mines (p. 109)

Area of Study

Engineering - Pre-Engineering Area of Study (p. 109)

Associate of Engineering Degree – Transfer track to Colorado State University

<https://registrar.colostate.edu/wp-content/uploads/sites/23/2021/11/Transfer-Guide-CCCS-Mechanical-Engineering.pdf>

Courses that Fulfill General Education Requirements (37 credits)

(Written) Communication

ENG 1021	English Composition I: CO1	3
	or	
ENG 1031	Technical Writing I: CO1	3
	and	
ENG 1022	English Composition II: CO2	3
		Subtotal: 6

Mathematics

MAT 2410	Calculus I: GT-MA1	5
MAT 2420	Calculus II: GT-MA1	5
		Subtotal: 10

Arts and Humanities

PHI 2018	Environmental Ethics: GT-AH3	3
	or	
	One GT Pathways Arts & Humanities course (GT-AH1, GT-AH2, GT-AH3, GT-AH4)	
		Subtotal: 3

Social and Behavioral Sciences

COM 2300	Intercultural Comm: SS3	3
	or	
	One GT Pathways Social & Behavioral Science course (GT-SS1, GT-SS2, GT-SS3)	3
		Subtotal: 3

Natural and Physical Sciences

CHE 1111	Gen College Chem I/Lab: SC1	5
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
		Subtotal: 15

Subtotal: 37

Additional Required Courses (27 credits)

Additional Required Courses

MAT 2430	Calculus III: GT-MA1	4
	or	
MAT 2431	Calculus III/Engineer App: GT-MA1	5
MAT 2561	Differential Equations with Engineering Applications: GT-MA1 and Linear Algebra	4
MAT 2540	Linear Algebra	3
	or	
MAT 2560	Differential Equations: GT-MA1 and Linear Algebra	3
MAT 2540	Linear Algebra	3
	or	
MAT 2562	Differential Equations with Linear Algebra	
EGG 2011	Engr Mechanics I - Statics	3
EGG 2012	Engineering Mech II (Dynamics)	3
EGG 1050	Engineering Data Analysis	1
	and	
EGG 1051	Experimental Design	2
EGG 1040	Engineering Projects	3
	or	
EGT 1110	Intro Design/Engineering Apps	3
EGG 1060	Intro to Engineering Computing	4
CAD 2455	SolidWorks/Mechanical	3

Subtotal: 27

TOTAL CREDIT HOURS: 64

NOTES:

1. Calculus III. Calculus III w/ Engineering Applications (MAT 2431) is preferred; However, additional credits over 64 may not transfer to CSU.
2. Differential Equations & Linear Algebra: It is recommended for students to complete MAT 2562. If a student completes MAT 2560 OR MAT 2561, they must also complete MAT 2540 Linear Algebra along with MAT 2560 or MAT 2561. Credits for MAT 2540 will need to be completed in addition to the 64 credits. Additional credits over 64 may not transfer to CSU.
3. The Associate of Engineering Science Degree with a concentration in Mechanical Engineering requires a minimum of 64 credits.

Associate of Engineering Degree - Transfer track to Colorado School of Mines

Degree Requirements

(Written) Communication

ENG 1031	Technical Writing I: CO1	3
	or	
ENG 1022	English Composition II: CO2	3
		Subtotal: 3

Mathematics

MAT 2410	Calculus I: GT-MA1	5
		Subtotal: 5

Arts and Humanities

PHI 2018	Environmental Ethics: GT-AH3	3
		Subtotal: 3

Social and Behavioral Sciences (6 credits)

Choose one of the following:

POS 2025	Comparative Government: SS1	3
HIS 2010	Family History & Genealogy	3
LIT 2002	World Lit After 1600: AH2	3
SOC 2007	Environmental Sociology:SS3	3
		Subtotal: 3

AND

ECO 2001	Prin of Macroeconomics: SS1	3
	or	
ECO 2002	Prin of Microeconomics: SS1	3
		Subtotal: 3

Additional Required Courses**Additional Required Courses**

MAT 2420	Calculus II: GT-MA1	5
MAT 2431	Calculus III/Engineer App: GT-MA1	5
MAT 2561	Differential Equations with Engineering Applications: GT-MA1	4
CHE 1111	Gen College Chem I/Lab: SC1	5
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
EGG 1110	Intro Design/Engineering Apps	3
		Subtotal: 32

AES Elective Courses (11-15 credits)

Select 11 -15 credits from the courses below:

Courses List

BIO 1111	Gen College Biology I/Lab: SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5
GEY 1111	Physical Geology w/Lab: SC1	4
MAT 1260	Intro to Statistics: MA1	3
EGG 2011	Engr Mechanics I - Statics	3
EGG 2012	Engineering Mech II (Dynamics)	3
CSC 1019	Intro. to Programming (lang) and	3
CNG 1024	Networking I: Network + or	3
CIS 2043	Introduction to SQL	3
CSC 1060	Computer Science I: (Language) or	4
CSC 1061	Computer Sci II: (Language)	4

PED courses (2 credits)**Subtotal: 2****Foreign Language Courses**

Up to 6 credits of foreign language at 1000 to 2000 level OR

Up to 6 credits in 2000 level or above in the following categories: GT-HI1, GT-AH2, GT-AH3, GT SS1, GT-SS2 and/or GT-SS3

Subtotal: 6**TOTAL CREDIT HOURS: 60-64****Engineering - Pre-Engineering Area of Study**

For those planning to transfer to a four-year college or university to complete a major in Engineering. Consult with a faculty advisor before beginning this area of study. If you plan to transfer to a college in Colorado, there is additional information about the Statewide Articulation Agreement for Engineering at the Colorado Department of Education's website. These courses provide the basic preparation leading to engineering-related careers.

Requirements**Suggested Courses for Transfer**

CHE 1111	Gen College Chem I/Lab: SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5
PHY 2111	Physics Calc-Based I/Lab: SC1	5
PHY 2112	Physics Calc-Based II/Lab: SC1	5
MAT 2410	Calculus I: GT-MA1	5
MAT 2420	Calculus II: GT-MA1	5
MAT 2431	Calculus III/Engineer App: GT-MA1	5
MAT 2561	Differential Equations with Engineering Applications: GT-MA1	4

* CHE 1111, CHE 1112, PHY 2111, and MAT 2410 fulfills General Education requirements.

General Education Courses

AS Degree Requirements (p. 49)

Subtotal: 26**TOTAL CREDIT HOURS: 60****Engineering Graphics Technology**www.rrcc.edu/engineering-graphics-technology

The Engineering Graphics Technology Program offers associate of science degrees and certificates. This program prepares you for employment as a design drafter.

Prerequisites may be waived or challenged for previous educational, occupational, or related experience. The curricula are designed to develop communication, leadership, and critical-thinking skills. The classroom setting will provide experience in the team approach to problem-solving. You will use Computer-Aided Design (CAD) to form the foundation for drafting standards, conventions, layouts, designs, and details of working drawings and models. Specifications, handbooks, and technical data applicable to engineering graphics are emphasized. Classes within the Engineering Graphics department are lecture/lab, and use the most current version of the software, when applied. It might be helpful to remember that one credit is equal to approximately twenty hours of class time. Lab fees are assessed. Consult with an Engineering Graphics Technology faculty advisor with any questions you have at 303-914-6572. You must earn a C or higher in all courses to graduate.

Certificates

Engineering Graphics Architectural (p. 111)
 Engineering Graphics Civil (p. 111)
 Engineering Graphics Mechanical (p. 111)
 Intro to AutoCAD (p. 111)
 Revit (p. 111)
 SolidWorks (p. 111)

Degree: Associate of Applied Science

Engineering Graphics Architectural (p. 111)
 Engineering Graphics Mechanical (p. 111)

Engineering Graphics Technology Certificates

TOTAL CREDIT HOURS: 6

Engineering Graphics Architectural Certificate

Certificate Requirements

Required Courses

CAD 1101	Computer Aided Drafting/2D I	3
CAD 1102	Computer Aided Drafting/2D II	3
AEC 1210	Basic Architectural Drafting	4
AEC 1231	Residential Construction Draw	4
AEC 1520	Construction Material/Systems	3
AEC 2210	Architectural Design & Analysis	4
CAD 1110	Sketchup	3
CAD 2220	Revit Architecture	3
		Subtotal: 27

And one of the following electives (3 credits):

CAD 2221	Advanced Revit Architecture	3
AEC 2300	Sustainable Building Systems	3
		Subtotal: 3

TOTAL CREDIT HOURS: 30

Engineering Graphics Civil Certificate

Certificate Requirements

Required Courses

CAD 1101	Computer Aided Drafting/2D I	3
CAD 2332	Civil 3D (Software)	3
GIS 1001	Introduction to GIS	3
EGT 2200	Civil/Survey Drafting I	3
		TOTAL CREDIT HOURS: 12

Engineering Graphics Mechanical Certificate

Certificate Requirements

General Education course required for this certificate: MAT 1340 or MAT 1260.

Required Courses

EGT 2303	Applied Dimension & Tolerance	3
CAD 2450	SolidWorks Basics	6
CAD 2451	SolidWorks Intermediate	6
CAD 2452	SolidWorks Advanced	6
		TOTAL CREDIT HOURS: 21

Intro to AutoCAD Certificate

Certificate Requirements

Required Courses

CAD 1101	Computer Aided Drafting/2D I	3
CAD 1102	Computer Aided Drafting/2D II	3

Revit Certificate

Certificate Requirements

Required Courses

CAD 2220	Revit Architecture	3
CAD 2221	Advanced Revit Architecture	3
		TOTAL CREDIT HOURS: 6

SolidWorks Certificate

Certificate Requirements

Required Courses

CAD 2450	SolidWorks Basics	6
CAD 2451	SolidWorks Intermediate	6
CAD 2452	SolidWorks Advanced	6
		TOTAL CREDIT HOURS: 18

Engineering Graphics Technology Degrees

Engineering Graphics Architectural AAS Degree

The Architectural AAS degree prepares you for a career in a construction or architectural firm. It might be helpful to remember that one credit is equal to approximately 20 hours of class time.

Degree Requirements

Required Courses

AEC 1210	Basic Architectural Drafting	4
AEC 1231	Residential Construction Draw	4
AEC 1520	Construction Material/Systems	3
AEC 2210	Architectural Design & Analysis	4
AEC 2300	Sustainable Building Systems	3
CAD 1101	Computer Aided Drafting/2D I	3
CAD 1102	Computer Aided Drafting/2D II	3
CAD 1110	Sketchup	3
CAD 2220	Revit Architecture	3
CAD 2221	Advanced Revit Architecture	3
CAD 2089	Capstone	6
CAD 2089	Capstone	6
		Subtotal: 45

General Education Courses

See AAS Degree Requirements (p. 55)

Subtotal: 15

TOTAL CREDIT HOURS: 60

Engineering Graphics Mechanical AAS Degree

The Mechanical AAS degree prepares you for a career with many options to choose from, such as mechanical design, piping, electrical, mining, or welding. Course electives allow you to select a preferred path in this field.

Degree Requirements

Required Courses

CAD 1101	Computer Aided Drafting/2D I	3
CAD 1102	Computer Aided Drafting/2D II	3

EGT 2303	Applied Dimension & Tolerance	3
EGT 1110	Intro Design/Engineering Apps	3
CAD 2450	SolidWorks Basics	6
CAD 2451	SolidWorks Intermediate	6
CAD 2452	SolidWorks Advanced	6
CAD 2089	Capstone	6
CAD 2089	Capstone	6
PHY 1105	Conceptual Physics w/Lab: SC1	4
		Subtotal: 46

TOTAL CREDIT HOURS: 60

General Education Courses

See AAS Degree Requirements (p. 55)

Required GenED Math course: MAT 1340 or MAT 1260

Subtotal: 15

TOTAL CREDIT HOURS: 61

English

www.rccc.edu/english

If you plan to transfer to a four-year college or university to complete a major in English or literature, the courses listed below provide basic preparation for further study and also can assist you with attaining your goal of working in an English/Literature-related career. Consult with a faculty or academic advisor before beginning this program of study. You may earn an associate of arts degree by meeting the AA general education requirements.

Degree: Associate of Arts

English AA Degree With Designation (p. 64)

Areas of Study

Literature Area of Study (p. 112)

Creative Writing Area of Study (p. 112)

English AA Degree With Designation

English AA Designated Degree Requirements (p. 64)

Literature Area of Study

Requirements

Communications

Subtotal: 3

Suggested Courses for Transfer

12 credits must be at the 2000-level

LIT 1015	Intro to Literature I: AH2	3
LIT 2005	Race, Ethnicity, Culture: AH2	3
LIT 2011	Amer Lit to Civil War: AH2	3
LIT 2012	Amer Lit Aft Civil War: AH2	3
LIT 2021	British Lit to 1770: GT-AH2	3
LIT 2022	British Lit Since 1770: GT-AH2	3
LIT 2046	Literature of Women: AH2	3
		Subtotal: 15

Elective with ENG or LIT prefix

Discuss elective options with English faculty advisor.

Subtotal: 8

General Education Courses

See AA Degree Requirements (p. 46)

Subtotal: 34

Creative Writing Area of Study

Suggested Electives

Required

ENG 2021	Creative Writing I: AH1	3
ENG 2026	Fiction Writing	3
ENG 2027	Poetry Writing	3
ENG 2030	Creative Nonfiction	3
ENG 2031	Literary Magazine	3

Fine Woodworking

www.rccc.edu/fine-woodworking

This program provides theory and hands-on training for entry-level skills through craftsman/advanced-level competencies. Day, evening, and weekend classes for part-time or full-time students include the areas of Lutherie (stringed instrument building), furniture making, cabinet making, wood carving, woodturning, and wood finishing and CNC technologies. Courses may be repeated up to three times to increase proficiency. All courses are sequenced as shown in the certificate.

Certificates

- Advanced Wood Turner (p. 113)
- Cabinetmaker (p. 113)
- Contemporary Furniture Fundamentals (p. 113)
- Craftsman (p. 112)
- Fine Furniture Craftsman (p. 113)
- Furniture Maker (p. 113)
- Lutherie Artisan (p. 114)
- Lutherie Fundamentals (p. 114)
- Lutherie Technician (p. 114)
- Woodturner (p. 113)
- Woodworking Artisan (p. 113)
- Woodworking Fundamentals (p. 112)

Degree: Associate of Applied Science

Fine Woodworking (p. 114)

Fine Woodworking Certificates

Woodworking Fundamentals Certificate

This certificate is designed to give you the basics of most woodworking applications. It is well-suited for those who are seeking an occupation within an existing woodworking industry and/or continuing their pursuit of a degree or a more advanced certificate.

Certificate Requirements

Required Courses

FIW 1012	Introduction to Woodworking	4
FIW 2001	Furniture I - Table Making	4

TOTAL CREDIT HOURS: 8

Craftsman Certificate

This certificate is designed for those who desire to show proficiency of their knowledge of the basic skills required for a woodworking craftsman in order to pursue a career within the field.

Certificate Requirements

Required Courses

FIW 1012	Introduction to Woodworking	4
FIW 2001	Furniture I - Table Making	4
FIW 2002	Furniture II-Carcass Construct	4
TOTAL CREDIT HOURS:		12

Cabinetmaker Certificate

Students seeking employment within the cabinetmaking industry are required to show competencies on the tools associated with, and the design of, traditional box cabinetmaking. This certificate is designed to include those skills which are commonly sought within this field.

Certificate Requirements

Required Courses

FIW 1009	Introduction to Cabinetmaking	4
FIW 1025	Finishing Wood	3
FIW 1028	Doormaking	4
FIW 2051	CNC Woodworking Router I	3
TOTAL CREDIT HOURS:		14

Furniture Maker Certificate

This certificate is designed for those who desire to show evidence of their knowledge of the skills required in order to seek employment within an existing furniture-making business or to pursue an entrepreneurial career within the field.

Certificate Requirements

Required Courses

FIW 1012	Introduction to Woodworking	4
FIW 1025	Finishing Wood	3
FIW 2001	Furniture I - Table Making	4
FIW 2002	Furniture II-Carcass Construct	4
FIW 2003	Furniture III-Chair Making	4
TOTAL CREDIT HOURS:		19

Contemporary Furniture Fundamentals Certificate

This certificate is designed for those who want to explore design and creative elements of contemporary furniture construction. This certificate is well suited for those who understand furniture construction and want to expand the possibilities within the contemporary furniture field of fine woodworking.

Certificate Requirements

Required Courses

FIW 1004	Elements of Design	2
FIW 1012	Introduction to Woodworking	4
FIW 1025	Finishing Wood	3
FIW 2001	Furniture I - Table Making	4
FIW 2012	Contemporary Furniture Making	4
TOTAL CREDIT HOURS:		17

Fine Furniture Craftsman Certificate

This certificate is designed for those who want to design and build reproduction or contemporary pieces of fine furniture. It is well suited for those seeking employment within an existing furniture-making business or to pursue an entrepreneurial career within the field.

Certificate Requirements

Required Courses

(3 credits of special topics finishing classes may be substituted for FIW 1025 with the advisor's permission)

FIW 1004	Elements of Design	2
FIW 1012	Introduction to Woodworking	4
FIW 1018	Introduction to Turning	3
FIW 1025	Finishing Wood	3
FIW 2001	Furniture I - Table Making	4
FIW 2002	Furniture II-Carcass Construct	4
FIW 2003	Furniture III-Chair Making	4
TOTAL CREDIT HOURS:		24

Woodworking Artisan Certificate

As an artisan in the woodworking field, one must have a profound comfort and expertise in the technical aspects of the material as well as desire to explore designing with it. This certificate is designed to challenge each student to excel in these areas to better prepare for the challenges of an entrepreneurial endeavor.

Certificate Requirements

Required Courses

FIW 1004	Elements of Design	2
FIW 1012	Introduction to Woodworking	4
FIW 1018	Introduction to Turning	3
FIW 1022	Wood Carving	3
FIW 1025	Finishing Wood	3
FIW 2000	Veneering and Marquetry	3
FIW 2001	Furniture I - Table Making	4
FIW 2002	Furniture II-Carcass Construct	4
FIW Elective	Any FIW Instrument course(s) equaling 6 credits	6
TOTAL CREDIT HOURS:		32

Woodturner Certificate

This certificate is designed for those desiring to explore the world of wood turning. Those who successfully complete this certificate are seeking to begin their own woodturning or craft-based businesses.

Certificate Requirements

Required Courses

FIW 1018	Introduction to Turning	3
FIW 1019	Intermediate Turning I	3
TOTAL CREDIT HOURS:		6

Advanced Wood Turner Certificate

This certificate is designed for those desiring to achieve a higher level of proficiency in wood turning. Those who successfully complete this certificate are seeking to begin or have already begun their own woodturning or craft-based businesses.

Certificate Requirements

Required Courses

FIW 1004	Elements of Design	2
FIW 1018	Introduction to Turning	3
FIW 1019	Intermediate Turning I	3
FIW 1020	Intermediate Turning II	3
FIW 1021	Advanced Turning	3
FIW 1022	Wood Carving	3

TOTAL CREDIT HOURS: 17**Lutherie Artisan Certificate**

As you progress through our rapidly growing luthier program, you may seek employment within the musical instrument repair and construction business or become an entrepreneur within this field of woodworking. You should plan to take your electives under the luthier program with special topic classes focused on your field of study. This certificate is designed to validate your experience in this field.

Certificate Requirements**Required Courses**

FIW 1005	Guitar Setup and Repair	3
FIW 1012	Introduction to Woodworking	4
FIW 1017	Steel-String Guitar Constr	4
FIW 1024	Electric Guitar Construction	4
FIW 1027	Classical Guitar Construction	4
FIW 1075	Special Topics	3
TOTAL CREDIT HOURS: 22		

Lutherie Fundamentals Certificate**Certificate Requirements****Required Courses**

FIW 1012	Introduction to Woodworking	4
FIW 1027	Classical Guitar Construction	4
TOTAL CREDIT HOURS: 8		

Lutherie Technician Certificate

This certificate is designed for those currently employed or seeking employment as a repair and setup technician. It is well suited for luthiers, entrepreneurs, and even music store owners.

Certificate Requirements**Required Courses**

FIW 1005	Guitar Setup and Repair	3
FIW 1075	Special Topics	3
TOTAL CREDIT HOURS: 6		

Fine Woodworking AAS Degree

The AAS degree in Fine Woodworking combines the skills of using power and hand tools to design and build fine furniture. You will be expected to develop portfolio quality work that demonstrates the ability to design and build original and reproduction pieces reflective of college-level work. Each course will challenge you to develop woodworking skills and specific traditional and contemporary techniques as you progress through the department.

The AAS degree includes 15 credits from General Education courses.

Degree Requirements**Required Courses**

FIW 1012	Introduction to Woodworking	4
FIW 1004	Elements of Design	2
FIW 1018	Introduction to Turning	3
FIW 1025	Finishing Wood	3
FIW 2001	Furniture I - Table Making	4
FIW 2002	Furniture II-Carcass Construct	4
FIW 2003	Furniture III-Chair Making	4
BUS 1002	Entrepreneurial Operations	3
FIW 2012	Contemporary Furniture Making	4
Subtotal: 31		

General Education Courses

See AAS Degree Requirements (p. 55)

Subtotal: 15**FIW Electives**

Required additional 14 credits from the FIW prefix, not listed above. Courses to be chosen from a specific area of emphasis in: furniture making, cabinet making, wood technology. Please meet with your faculty advisor for the correct courses.

Subtotal: 14**TOTAL CREDIT HOURS: 60****Fire Science Technology**

www.rccc.edu/fire-science

Completion of this curriculum prepares you for

- Entry into a career in fire suppression, prevention, or related fields
- Promotion within a fire department or within the fire service
- Transfer to a four-year college in pursuit of a Bachelor's of Science degree
- A grade of C or higher is required in all coursework

Certificates

Fire Academy / Fire Fighter I (p. 114)
 Fire Fighter II (p. 114)
 Fire Instructor (p. 115)
 Fire Officer I (p. 115)

Degrees: Associate of Applied Science

Fire Service Management (p. 115)
 (p. 115)Fire and Emergency Services (p. 115)

Fire Science Technology Certificates**Fire Academy / Fire Fighter I Certificate****Requirements****Required Courses**

FST 1000	Firefighter I	9
FST 1007	HazMat Operations (Level I)	3
TOTAL CREDIT HOURS: 12		

Taking FST 1007 and FST 1000 together is required to enhance the Fire Academy experience allowing students to meet the minimum standards for initial entry firefighters to be hired and to take the firefighter I and Haz Mat Ops and Awareness Certification tests from the State. You must earn a C or higher in all Fire Science educational courses.

Fire Fighter II Certificate**Requirements****Required Courses**

FST 1002	Principles/Emergency Services	3
FST 1003	Fire Behavior & Combustion	3
FST 1009	Occupational Safety & Health	3
FST 2002	Strategy & Tactics	3
PED 1001	Conditioning Lab	1

Choose one of the following

FST 2053	NIMS	3
EMP 1009	Incident Command Systems	3

TOTAL CREDIT HOURS: 16

Fire Instructor Certificate

Requirements

Required Courses

FST 2001	Instructional Methodology	3
COM 1150	Public Speaking	3
		TOTAL CREDIT HOURS: 6

Fire Officer I Certificate

Requirements

Required Courses

FST 1003	Fire Behavior & Combustion	3
FST 2002	Strategy & Tactics	3
FST 2004	Principles of Code Enforcement	3
FST 2006	Fire Co Superv and Leadership	3
		TOTAL CREDIT HOURS: 12

Fire Science Technology Degrees

Fire Service Management AAS Degree

This degree is for you if you are experienced as a firefighter and preparing for career advancement. You must earn a C or higher in all Fire Science and general education courses to graduate.

Emphasis is placed on the latest methodologies of fire prevention, incident management, and leadership principles within the fire service. Upper-level course work includes the study of fire scene strategy and tactics, the national incident management system, legal and administration issues in the fire service, and fire service leadership. The majority of this degree program is available online.

The Fire Service Management degree program credits may be transferred to Regis University, or other colleges, toward a Bachelor of Science degree in Public Administration or Applied Science.

Degree Requirements

Required Courses

FST 1002	Principles/Emergency Services	3
FST 1003	Fire Behavior & Combustion	3
FST 1005	Building Construction for Fire	3
FST 1006	Fire Prevention	3
FST 1009	Occupational Safety & Health	3
FST 2001	Instructional Methodology	3
FST 2004	Principles of Code Enforcement	3
FST 2006	Fire Co Superv and Leadership	3
FST 2007	Strategy and Tactics II	3
FST 2009	Fire Protection Systems	3
FST 2051	Legal Aspects of Fire Service	3
FST 2089	Capstone	3
		Subtotal: 36

General Education Courses (15 credits)

ENG 1021	English Composition I: CO1	3
MAT 1140	Career Math	3

Choose from TWO of the following areas for a total of 6 credits:

Arts & Humanities:

ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA

Physical and Life Sciences:

AST, BIO, CHE, GEY, PHY

Social and Behavioral Science:

ANT, ECO, GEO, HIS, POS, PSY, SOC

And

Choose an additional 3 credits from any of the above prefixes or CIS 1018 (p. 162)

Elective Courses

FST 2002	Strategy & Tactics	3
FST 2005	Fire Investigation I	3
FST 2051	Legal Aspects of Fire Service	3
FST 2053	NIMS	3
FST 2055	Fire Service Management	3
or		
preferred elective:		
FST 2057	Fire Department Administration	3

Subtotal: 9

TOTAL CREDIT HOURS: 60

Fire and Emergency Services AAS Degree

This program of study is designed for students new to, or preparing for, the fire service or emergency services. You must earn a C or higher in all courses to graduate.

Degree Requirements

Required Courses

FST 1002	Principles/Emergency Services	3
FST 1003	Fire Behavior & Combustion	3
FST 1009	Occupational Safety & Health	3
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
EMP 1009	Incident Command Systems	3
or		
FST 2053	NIMS	3

Subtotal: 24

General Education Courses (15 credits)

ENG 1021	English Composition I: CO1 or higher	3
ENG 1031	Technical Writing I: CO1 recommended	
MAT 1140	Career Math or higher	3
MAT 1340	College Algebra is recommended	

Choose from TWO of the following areas for a total of 6 credits:

Arts & Humanities:

ART, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA

Physical and Life Sciences:

AST, BIO, CHE, GEY, PHY

Social and Behavioral Science:

ANT, ECO, GEO, HIS, POS, PSY, SOC

And

Choose an additional 3 credits from any of the above prefixes or CIS 1018 (p. 162)

Elective Courses

Choose 21 credits from the following:

FST, EMS, EMP, or HPR (1000 level and above)

Subtotal: 21

Subtotal: 45

TOTAL CREDIT HOURS: 60

Foreign Languages

See World Languages (p. 145)

French

www.rrcc.edu/world-languages

Degree: Associate of Arts

French AA Degree With Designation (p. 64)

Geography

www.rrcc.edu/geography

Degree: Associate of Arts

Geography AA Degree With Designation (p. 65)

Geology

www.rrcc.edu/geology

Degree: Associate of Science

Geology AS Degree With Designation (p. 65)

Areas of Study

Environment Science Area of Study (AS degree) (p. 116)

Environment Studies Area of Study (AA degree) (p. 116)

Geology Areas of Study

Environmental Science Area of Study (AS Degree)

For those planning to transfer to a four-year college or university to complete a major in Environmental Science. Consult with a faculty advisor before beginning this area of study. Environmental Science is an interdisciplinary discipline, integrating and applying concepts from all of the natural sciences in order to study real-world problems related to human interaction with the natural world.

Suggested GT Courses for Transfer

Suggested Courses

MAT 2410	Calculus I: GT-MA1	5
PHI 2018	Environmental Ethics: GT-AH3	3
HIS 2125	American Environment Hist: GT-HI1	3
ECO 2045	Environmental Economics:SS1	3
SOC 2007	Environmental Sociology:SS3	3
ENV 1111	Environmental Sci w/Lab: SC1	4

Choose one or more from the following

GEY 1111	Physical Geology w/Lab: SC1	4
GEY 1135	Environmental Geol w/Lab: SC1	4
MET 1050	Gen Meteorology w/Lab: SC1	4

Either (10 credits)

BIO 1111	Gen College Biology I/Lab: SC1	5
BIO 1112	Gen College Biology II/Lab:SC1 or	5
CHE 1111	Gen College Chem I/Lab: SC1	5
CHE 1112	Gen College Chem II/Lab: SC1	5

Subtotal: 10

Either (5 credits)

whichever not taken for sequence

BIO 1111	Gen College Biology I/Lab: SC1	5
or		
CHE 1111	Gen College Chem I/Lab: SC1	5

Subtotal: 5

Additional General Education Courses

See AS Degree Requirements (p. 49)

TOTAL CREDIT HOURS: 60

Environmental Studies Area of Study (AA Degree)

For those planning to transfer to a four-year college or university to complete a major in Environmental Studies. Consult with a faculty advisor before beginning this area of study. Environmental Studies is an interdisciplinary program intended to provide liberal and practical education in the science and culture of critical, contemporary environmental issues.

Suggested GT Courses for Transfer

Suggested Courses

MAT 1260	Intro to Statistics: MA1	3
PHI 2018	Environmental Ethics: GT-AH3	3
HIS 2125	American Environment Hist: GT-HI1	3
ECO 2045	Environmental Economics:SS1	3
SOC 2007	Environmental Sociology:SS3	3
ENV 1111	Environmental Sci w/Lab: SC1	4
ENV 1010	Natural Disasters: SC2	3

Choose one of the following (3, 4 or 5 credits)

BIO 1003	Principles of Animal Bio SC2	3
BIO 1005	Science of Biology w/Lab: SC1	4
BIO 1111	Gen College Biology I/Lab: SC1	5
BIO 1112	Gen College Biology II/Lab:SC1	5

Subtotal: 3-5

Choose one of the following (3 or 4 credits)

GEO 1005	World Regional Geography: SS2	3
GEO 1006	Human Geography: SS2	3
GEO 1011	Phys Geo: Lndfrms w/Lab: SC1	4
GEO 1012	Phys Geo:Clim & Eco w/Lab: SC1	4

Subtotal: 3-4

Choose one of the following (3 or 4 credits)

GEY 1108	Geology of National Parks: SC2	3
GEY 1111	Physical Geology w/Lab: SC1	4
GEY 1135	Environmental Geol w/Lab: SC1	4
GEY 1155	General Oceanography w/Lab:SC1	4
MET 1050	Gen Meteorology w/Lab: SC1	4

Subtotal: 3-4

Other Recommendations:

Choose courses in ANT, CHE, ENV, POS, or SUS

Additional General Education Courses

See AA Degree Requirements (p. 46)

TOTAL CREDIT HOURS: 60

Geology AS Degree With Designation

For those planning to transfer to a four-year college or university to complete a major in Geology. Consult with a faculty advisor before beginning this area of study.

Geology AS Designated Degree Requirements (p. 65)

Health Sciences Programs

www.rccc.edu/health-sciences

- Integrated Pathway in Nursing (p. 125)
- Integrative Health Professions (p. 117)
- Medical Assisting Professional (p. 121)
- Nurse Aide Certificate (p. 125)
- Phlebotomy (p. 131)
- Physician Assistant Program (p. 133)
- Radiologic Technology (p. 136)
- RN Refresher (p. 125)
- Social Work (p. 137)
- Sonography (p. 138)

History

www.rccc.edu/history

Degree: Associate of Arts

History AA Degree With Designation (p. 66)

History AA Degree With Designation

For those who plan to transfer to a four-year college or university to complete a major in History. This program provides preparation if you are interested in teaching, government service, law, research, business and industry, journalism, publishing, libraries, or working with historical societies, museums, and/or archives. Consult with a faculty advisor before beginning this program of study.

Honors Program

Students accepted into the program will complete a series of courses and other requirements to earn the Honors Scholar designation at graduation.

www.rccc.edu/honors

Program Mission

The Honors Program at RRC provides exceptional learning opportunities through interdisciplinary education and problem-solving experiences for a community of scholars in order to prepare them to be leaders in a global community.

Degree: Associate of Arts

AA Degree With Honors

Degree: Associate of Science

AS Degree With Honors

Area of Study

All STEM areas

Coursework

Honors Program Coursework (p. 117)

Honors Program Coursework

Requirements

Required Courses

HNR 1000	Honors Seminar:	1
HNR 1002	Honors Colloquium I:	2
HNR 2002	Honors Colloquium II:	2
HNR 2089	Capstone: Honors	0.25-4
		Subtotal: 9

Honors Option Courses (also fulfills degree requirements):

- English, Arts, or Humanities (minimum 3 credits)
- History or Social Science (minimum 3 credits)
- Mathematics or Sciences (minimum 3 credits)

Subtotal: 9

TOTAL CREDIT HOURS: 18

HVAC

See Air Conditioning, Heating, and Refrigeration (p. 82)

Integrated Health Professions

www.rccc.edu/integrative-health-professions

This program provides the opportunity to learn a variety of complementary healing modalities. Upon completion of the program, you may apply your knowledge in wellness centers, clinics, spas, and fitness centers.

Certificates

- Integrative Health Practitioner (p. 118)
- Energy Medicine (p. 117)
- Reflexology Professional (p. 118)
- Wellness Coaching (p. 118)
- Yoga Teacher Training (p. 118)

Degree: Associate of Applied Science

Integrative Health Professions (p. 118)

Integrated Health Certificates

Energy Medicine Certificate

Energy Medicine is a compilation of healing energy practices. This certificate in Integrative Health uses practices such as Reiki, Healing Touch, Jin Shin, and Healing Applications of Crystals just to name a few. The certificate is a compilation of classes in the Integrative Health Professions that students can take out into the community and work at wellness centers, hospitals, private practices, and gym facilities.

Certificate Requirements

Electives

Choose five (5) credits from the following:

IHP 1017	Meridian Acupoint Tapping	2
IHP 1052	Meditation for Health	1
IHP 2000	Creating Healing Presence	1
IHP 2004	Ethics in Integrative Health	2
IHP 2005	Integrative Business Practices	2
IHP 2027	Bach Flower Essences	2
IHP 2064	Mind, Body, Spirit, and Energy	3
		Subtotal: 5

Required Courses

IHP 1002	Integrative Health I	1
IHP 1020	Reiki Level I	1
IHP 1021	Reiki Level II	1
IHP 1022	Reiki Level III - Mstr Tchr	1
IHP 1024	Health Apps of Crystals	1
IHP 2002	Integrative Health II	2
IHP 2020	Healing Touch Level I	1
IHP 2021	Healing Touch Level II	1
IHP 2022	Healing Touch Level III	1
IHP 2023	Jin Shin Self-Care	1
BIO 1006	Basic Anatomy and Physiology	4
		Subtotal: 15

TOTAL CREDIT HOURS: 20

Integrative Health Practitioner Certificate

This program was originally created for nurses and is now open to all interested persons who want to expand their knowledge and skills in the holistic care. The program is intended to enhance health-care practice as well as to prepare you to be a facilitator in the redesigning of the new health care system. Courses are offered to integrate healing on all levels: physical, emotional, mental and spiritual. "C" grade in all course work is required to receive this certificate.

Certificate Requirements

Required Courses

IHP 1002	Integrative Health I	1
IHP 1058	Intro to Hlth and Wlnss Coach	1
IHP 2002	Integrative Health II	2
IHP 2089	Integrative Health Capstone	2
		Subtotal: 6

*10 credits must be completed before participating in IHP 2089 Integrative Health Capstone.

Electives

Any IHP course EXCEPT: IHP 1002, IHP 1058, IHP 2002, IHP 2050, or IHP 2089 (yoga teacher training)

Subtotal: 10

TOTAL CREDIT HOURS: 16

Reflexology Professional Certificate

The Healing Hands and Feet program student undergoes a vigorous and comprehensive program that includes 200 hours of standardized curriculum with a Certified Program instructor. Reflexology uses gentle pressure on the feet or hands and works reflex points that correspond to different areas of the body. Reflexology has been integrated into the health care field by doctors, nurses, and massage therapists. A "C" grade in all course work is required to receive this certificate.

Certificate Requirements

Required Courses

BIO 1006	Basic Anatomy and Physiology	4
IHP 1015	Introduction to Reflexology	1
IHP 1016	Reflexology of the Hands/Feet	3
IHP 2004	Ethics in Integrative Health	2
IHP 2005	Integrative Business Practices	2
IHP 2015	Advanced Reflexology	2
IHP 1088	Practicum	1
	IHP 1088 (needs to be taken twice)	1
IHP 2070	Clinical - Reflexology	2

The IHP 1088 course is offered in both the spring and fall and needs to be taken twice for this certificate.

TOTAL CREDIT HOURS: 18

Wellness Coaching Certificate

Wellness coaching is an emerging field in healthcare that focuses on empowering clients to make healthy lifestyle changes to optimize their health and wellbeing. Wellness coaches are individuals highly trained in behavior change. Wellness coaches help the client to achieve health physically, emotionally, intellectually and spiritually. Many wellness coaches work in corporations that have wellness benefits for their employees, fitness centers, and health clinics. "C" grade in all course work is required to receive this certificate.

Certificate Requirements

Required Courses

IHP 1002	Integrative Health I	1
IHP 1007	Stress Management for Health	1
IHP 1008	Journaling Towards Wellness	1
IHP 1052	Meditation for Health	1
IHP 1058	Intro to Hlth and Wlnss Coach	1
IHP 2002	Integrative Health II	2
IHP 2005	Integrative Business Practices	2
IHP 2040	Holistic Nutr: Digestive Welns	3
IHP 2058	Adv. Health/Wellness Coaching	3
IHP 2089	Integrative Health Capstone	2
HWE 1050	Human Nutrition	3
HWE 1061	Fitness and Wellness	2
		Subtotal: 22

Required Elective Courses

Select additional courses in IHP/HWE/PED/HPR in consultation for approval from the IHP faculty advisor or Department Chair. IHP 2050 not included as elective option.

Subtotal: 3

TOTAL CREDIT HOURS: 25

Yoga Teacher Training Certificate

Covers the requirements to be a professional Hatha Yoga teacher. Enables participants to understand and practice Yoga and develop skills to teach a wide variety of people in various settings. On completion of this certificate, you will be able to obtain certification from the Yoga Alliance. "C" grade in all course work is required to receive this certificate.

It is highly recommended that you have taken a yoga course before enrolling in this program. Recommended course: PED 1043.

Certificate Requirements

Required Courses

IHP 2050	RYT 200 Yoga Teacher Training	10
		TOTAL CREDIT HOURS: 10

Integrated Health Degrees

Integrative Health AAS Degree

This program provides the opportunity to learn a variety of complementary healing modalities. Upon completion of the program, you may apply your knowledge in wellness centers, clinics, spas, and fitness centers. The AAS degree can be transferred to Metropolitan State University of Denver into their Bachelor's of Science Degree in Integrative Healthcare Program. "C" grade in all course work is required to receive this degree. (This degree transfers into the Integrated Healthcare Bachelor of Science degree at Metro State University of Denver).

Degree Requirements

Required Courses

HWE 1050	Human Nutrition	3
IHP 1002	Integrative Health I	1
IHP 1058	Intro to Hlth and Wlnss Coach	1
IHP 2002	Integrative Health II	2
IHP 2089	Integrative Health Capstone	2
		Subtotal: 9

* Required: 10 IHP elective credits before taking IHP 2089 - EXCEPT IHP 2050 Yoga teacher training.

General Education Courses

English/Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
COM 1150	Public Speaking	3
COM 1250	or Interpersonal Comm: SS3	3
		Subtotal: 9

Mathematics

MAT 1260	Intro to Statistics: MA1	3
		Subtotal: 3

Arts and Humanities

Choose any 6 credits from this area of Statewide GT (Guaranteed Transfer) courses.

Subtotal: 6

Natural and Physical Sciences

BIO 1111	Gen College Biology I/Lab: SC1	5
BIO 2101	Human Anatomy & Phys I w/Lab: SC1	4
BIO 2102	Human Anatomy & Phys II w/Lab: SC1	4
CHE 1011	Intro to Chemistry I/Lab: SC1	5
		Subtotal: 18

Social and Behavioral Sciences

ANT 1001	Cultural Anthropology: SS3	3
HIS	Chose any Statewide GT course	3
		Subtotal: 6

IHP Electives

Any IHP course, except IHP 1002, IHP 2002, IHP 2089, IHP 1058, and IHP 2050

Subtotal: 10

TOTAL CREDIT HOURS: 61

Journalism

www.rccc.edu/journalism

The mission of the Journalism, Multimedia Graphics and Design, and the Photography Department is to provide students with opportunities for growth and development that set the foundation for self-directed learning, academic achievement, relevant, real-world training, and career accomplishment for commercial application. We do this through high quality, innovative educational programs using current technical, creative, and software trends in the industry. We convey our passion for learning, our commitment to excellence, and our dedication to our students in the communities we serve. Through critical thinking we prepare our students, both entry level and continuing education to create the necessary skill set in visual communication and production of photographic images, motion, graphics or digital media. Red Rocks Community College offers both associate degrees and certificates in the Visual, Audio, & Media Art programs that will prepare you to enter the work force upon graduation.

Certificates

- Introduction to New Media (p. 119)
- New Media Journalist (p. 119)

Degree: Associated of Applied Science

- Digital Media/Journalism (p. 119)

Degree: Associated of Arts

- Journalism AA Designated Degree (p. 66)

Journalism Certificates

Introduction to New Media Certificate

The Introduction to New Media certificate prepares you prepares you for work with blogs, microblogs, and social networking applications for delivering mass media using the Internet as the primary means of media distribution.

Certificate Requirements

Required Courses

MGD 1002	Introduction To Multimedia	3
JOU 2025	New Media	3

TOTAL CREDIT HOURS: 6

New Media Journalist Certificate

The New Media Journalist Certificate teaches advanced Editing and advanced internet media in addition to the ethics in the field. You will combine traditional journalism skills in writing and editing with digital skills in video, page layout, and production to produce e-zines, blogs, podcasts, and other relevant Internet.

Certificate Requirements

Intro to New Media Certificate

MGD 1002	Introduction To Multimedia and	3
JOU 2025	New Media	3

Subtotal: 6

Required Courses

JOU 1005	Introduction to Mass Media: SS3	3
MGD 1004	Videography	3
MGD 1013	Adobe InDesign	3
ART 1401	Digital Photography I	3

Subtotal: 12

TOTAL CREDIT HOURS: 18

Journalism Degrees

Digital Media Journalism AAS Degree

The AAS in Digital Media Journalism prepares you for work with blogs, microblogs, social networking applications, virtual worlds, audio, and video podcasting for delivering mass media using the Internet as the primary means of media distribution. You will combine traditional journalism skills in writing and editing with digital skills in video, page layout, and production to produce e-zines, vlogs, podcasts, and other relevant Internet publications. Information: www.rccc.edu/journalism

Degree Requirements

Required Courses

JOU 1002	Intro to Editing for Media	3
JOU 1005	Introduction to Mass Media: SS3	3
JOU 1006	Media News and Reporting	3
JOU 1021	Photojournalism	3
JOU 2006	Intermediate Newswriting & Editing	3
JOU 2015	Publications Prod & Design	3
JOU 2025	New Media	3
JOU 2041	Feature and Magazine Writing	3
MGD 1002	Introduction To Multimedia	3
MGD 1011	Adobe Photoshop I	3
MGD 1013	Adobe InDesign	3

Subtotal: 33

General Education Courses

See AAS Degree Requirements (p. 55)

* ART 1115, ART 1402, or ART 1401 may be used to fulfill one Arts & Humanities and the General Education Elective. Students may substitute ART/PHO/MGD classes if the ART 1115, ART 1402, or ART 1401 are counted toward the Arts & Humanities and General Education Course Requirements.

Subtotal: 15

Electives

Recommended Electives: Choose 4 classes from the following:

PHO 1055	Photog of the Human Form I	3
ART 1401	Digital Photography I	3
MGD 1012	Adobe Illustrator I	3
MGD 2068	Business for Creatives	3

Subtotal: 12

TOTAL CREDIT HOURS: 60

Journalism AA Degree with Designation

Journalism AA Designated Degree Requirements (p. 66)

Law Enforcement

www.rbcc.edu/law-enforcement-academy

Certificates

Law Enforcement Academy (P.O.S.T. Certification) (p. 120)

Law Enforcement Technician (p. 120)

Degree: Associate of Applied Science

Law Enforcement (p. 120)

Law Enforcement Certificates

Law Enforcement Academy (P.O.S.T. Certification)

This certificate program exceeds the Colorado Peace Officers Standards and Training (P.O.S.T.) requirements for peace officer entry-level training. You will earn 39 credits during this intense course of study. To receive a Red Rocks Community College law enforcement certificate, candidates must successfully score 80 percent or above. This is not an open enrollment offering. You must make separate application to the Academy. See www.rbcc.edu/law-enforcement-academy for details.

Requirements

Required Courses

LEA 1001	Basic Police Academy I	6
LEA 1002	Basic Police Academy II	12
LEA 1003	Basic Law Enforcement Acad III	2
LEA 1004	Basic Law Enforcement Acad. IV	1
LEA 1005	Basic Law	8
LEA 1006	Arrest Control Techniques	3
LEA 1007	Law Enforcement Driving	3
LEA 1008	Firearms	3
PED 1001	Conditioning Lab	1

TOTAL CREDIT HOURS: 39

Law Enforcement Technician Certificate

This certificate was designed for students younger than 21, the required age to enter into the police academy. It is as an excellent first step towards preparing for the police academy. As a standalone certificate, it opens the door for positions such a dispatchers (public safety telecommunications), compliance officers, animal control, Gambling Surveillance Officers, and Gambling Investigators, in demand careers that require a minimum of a high school diploma or equivalent. With the Law Enforcement Technician certificate, our students will have the added advantage of relevant educational background making them top candidates for many of these public safety-related careers; plus, any relevant work experience will make our students stronger candidates for the police academy.

Requirements

Required Courses

LEA 1010	Career Management	1
LEA 1011	Defensive Weapons	1
LEA 1018	Report Writing	3
LEA 1026	Patrol Procedures	3
LEA 1031	Basic Law for Reserve Officer	2
LEA 2040	Criminal Investigations	3

LEA 2047	Street Survival Techniques	2
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TOTAL CREDIT HOURS: 15

Law Enforcement AAS Degree

Specific courses required may vary, depending upon your background and work experience. Upon completion of this program, you should be able to be employed as a law enforcement patrol officer at departments requiring a two-year college degree.

Requirements

Required Courses

LEA 1001	Basic Police Academy I	6
LEA 1002	Basic Police Academy II	12
LEA 1003	Basic Law Enforcement Acad III	2
LEA 1004	Basic Law Enforcement Acad. IV	1
LEA 1005	Basic Law	8
LEA 1006	Arrest Control Techniques	3
LEA 1007	Law Enforcement Driving	3
LEA 1008	Firearms	3
PED 1001	Conditioning Lab	1

Subtotal: 39

General Education Courses (15 credits)

ENG 1021	English Composition I: CO1	3
	or	
COM 1150	Public Speaking	3
	or	
COM 1250	Interpersonal Comm: SS3	3
MAT 1140	Career Math	3
	or higher	
PSY/SOC	1000 or higher	3

AND

Choose from TWO of the following areas for a total of 6 credits:

Humanities: ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE (1000 and above)

Physical and Life Sciences: AST, BIO, CHE, ENV, GEY, MET, NRE, PHY, SCI (1000 and above)

Social and Behavioral Science: ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC (1000 and above).

Subtotal: 15

Required Advisor-Approved Electives (6 credits)

LEA 1009	Culture & Conflict Resolution	2
LEA 1016	Civil Liability	3
LEA 1018	Report Writing	3
LEA 2018	Drug Investigative Strategies	3
LEA 2021	Community Problem Solving	3
LEA 2040	Criminal Investigations	3
LEA 2047	Street Survival Techniques	2
	or	
CRJ 1010	Intro to Criminal Justice: SS3	3
CRJ 1025	Policing Systems	3
CRJ 1035	Judicial Function	3
CRJ 2005	Principles of Criminal Law	3

Subtotal: 6

TOTAL CREDIT HOURS: 60

Management and Marketing

See **Business** (p. 87)

Mathematics

www.rbcc.edu/mathematics

Degree: Associate of Science

Mathematics AS Degree With Designation (p. 67)

Mathematics AS Degree With Designation

If you plan to transfer to a four-year college or university to complete a major in Mathematics, you should complete the courses for the Mathematics AS Degree With Designation. Consult with the Math department chair or an academic advisor before beginning this program of study. These courses provide the basic preparation leading to mathematics-related careers. You may earn an associate of science degree by meeting the general education requirements.

Medical Imaging

See **Radiologic Technology** (p. 136) or **Sonography** (p. 138)

Medical Assisting Professional

www.rbcc.edu/medical-assisting

The medical assisting program is designed to prepare you as a health career professional, assisting physicians/providers in various medical and business settings. It is recommended that you take a course in or have proficiency in working with Microsoft Office Word, Excel, and Outlook. Transfer credits are accepted from qualifying educational institutions; however, MAP 1083, MAP 2038, MAP 2040, MOT 1036, MOT 1081, MOT 1082, and MOT 1084 are required to be taken at Red Rocks Community College. Some skills courses and internships require proof of immunizations. All program students, at their own cost, must complete and pass a criminal background check and health/drug screen a minimum of 60 days prior to enrolling in internships by using the current RRCC-approved background check and drug screen program. These background/drug tests are only good for one year. Immunizations, background check/drug screen, physician approval, and CPR are required of all Medical Assisting students prior to internship. Internship must be taken within four months of completion of the final advanced skills course MAP 2040. A minimum grade of C must be achieved for all program-required courses to proceed to internship and graduate with a certificate or degree. You should consult with the Medical Assisting Director or refer to the website to ensure proper sequencing of courses and other educational options. Most MOT/MAP courses are not offered in the summer semester. Program completion time ranges from 2 ½ semesters to two years. If your completion is significantly greater than this, you may be asked to retake courses for proper skill abilities prior to internship. At the completion of the program, you are required to take the national certification exam (AAMA) to become a Certified Medical Assistant.

You will be asked to have a watch, a personal BP cuff/stethoscope and scrubs for this program.

Certificate

Medical Assisting (p. 121)

Degree: Associate of Applied Science

Medical Assisting (p. 122)

Medical Assisting Certificate

The Medical Assisting certificate program is accredited by the Commission on Accreditation of Allied Health Education Programs, 9355 – 113th St. N. #7709, Seminole, FL 33775, 727-210-2350, www.caahep.org, upon the recommendation of MAERB.

At the completion of the program you are required to take the national certification exam (AAMA) to become a Certified Medical Assistant. CCR 0092 and CCR 0094, or appropriate placement scores, are required for many of the program courses. A math prerequisite of MAT 0250 or higher is required for MAP 2040 and MAP 1050 for all certificate students.

Hepatitis B immunizations will be required before taking MAP 2038 and MAP 2040. All courses must be passed with a grade of "C" or higher and those classes within the MOT or MAP prefix must have a passing grade on all competencies. Internship must be started within four months of completing the MAP 2040 course. Please note that most MOT/MAP courses are not offered in the summer session.

Requirements

Required Courses

BIO 1006	Basic Anatomy and Physiology	4
BIO 1016	Intro to Human Disease: SC2	3
HPR 1008	Law & Ethics for Health Prof	2
HPR 1040	Comprehensive Medical Terminol	3
MAP 1010	Medical Office Administration	4
MAP 1020	Medical Office Financial Mgmt	4
MOT 1036	Intro to Clinical Skills	3
MAP 2038	Medical Assisting Laboratory	4
MAP 2040	Medical Assist Clinical Skills	4
MAP 1050	Pharmacology- Medical Assts	3
MAP 1083	Medical Assistant Internship	5
	or	
MOT 1081	Administrative Internship	2
	and	
MOT 1082	Internship: Clinical	3

TOTAL CREDIT HOURS: 39

Medical Assisting AAS Degree

The Medical Assisting degree program receives a medical assisting certificate which is accredited by the Commission on Accreditation of Allied Health Education Programs, 9355 – 113th St. N. #7709, Seminole, FL 33775, 727-210-2350, www.caahep.org, upon the recommendation of MAERB in addition to an AAS degree accredited by the state of Colorado.

At the completion of the program, you are required to take the national certification exam (AAMA) to become a Certified Medical Assistant. AAS degree requirements include ENG 1340 and MAT 1240 or higher (if you will be pursuing an additional health career after completion please see an Advisor to know the best choice of MAT course).

Hepatitis B immunizations will be required before taking MAP 2038 and MAP 2040. All courses must be passed with a grade of "C" or higher and those classes within the MAP & MOT prefix must have a passing grade on all competencies. Internship must be started within four months of completing the MAP2040 course. Please note that most courses are not offered in the summer semester.

Requirements

Required Courses

BIO 1006	Basic Anatomy and Physiology	4
BIO 1016	Intro to Human Disease: SC2	3
COM 1260	Communication in Healthcare	3
HPR 1008	Law & Ethics for Health Prof	2
HPR 1040	Comprehensive Medical Terminol	3
MOT 1036	Intro to Clinical Skills	3
MAP 1010	Medical Office Administration	4
MAP 1020	Medical Office Financial Mgmt	4
MAP 2038	Medical Assisting Laboratory	4
MAP 2040	Medical Assist Clinical Skills	4
MAP 1050	Pharmacology- Medical Assts	3
MAP 1083	Medical Assistant Internship	5
	or	
MOT 1081	Administrative Internship	2
	and	
MOT 1082	Internship: Clinical	3
		Subtotal: 42

NOTE:

BIO 2101 and BIO 2102 may be substituted for BIO 1006

General Education Courses (15 credits)

ENG 1021	English Composition I: CO1	3
MAT 1140	Career Math	3

And choose from any two of the following three areas for a total of 9 credits:

Arts & Humanities: ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE (1000 and above)

Physical and Life Sciences: AST, BIO, CHE, ENV, GEY, MET, NRE, PHY, SCI (1000 and above)

Social and Behavioral Science: ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC (1000 and above).

Plus

one additional course if necessary from any of the above areas.

General education courses may only apply to one category for graduation.

Faculty approved electives from the following (3 credits):

Any course from the following prefixes: BIO, CHE, MOT, PSY, RTE, SOC, SPA

Course electives:

HWE 1050, HWE 1002; HHP211; HPR 1010; MAN 1028, MAN 2012, MAN 2024 or MAN 2026; BUS 1018.

Subtotal: 3**TOTAL CREDIT HOURS: 60**

Multimedia Graphic Design

www.rccc.edu/multimedia

The mission of the Journalism, Multimedia Graphics and Design, and the Photography Department is to provide students with opportunities for growth and development that set the foundation for self-directed learning, academic achievement, relevant, real-world training, and career accomplishment for commercial application. We do this through high quality, innovative educational programs using current technical, creative, and software trends in the industry. We convey our passion for learning, our commitment to excellence, and our dedication to our students in the communities we serve. Through critical thinking we prepare our students, both entry level and continuing education to create the necessary skill set in visual communication and production of photographic images, motion, graphics or digital media.

Red Rocks Community College offers both associate degrees and certificates in the Visual, Audio, & Media Art programs that will prepare you to enter the work force upon graduation.

Certificates

- Business for Creatives (p. 122)
- Introduction to Graphic Design (p. 122)
- Graphic Design & Print Production (p. 122)
- Graphic Design - Intro to Web Design (p. 123)
- Graphic Design - Advanced Web Design (p. 123)

Degrees: Associate of Applied Science

- Graphic Design and Print Production (p. 124)
- Simulation and Game Design (p. 124)

Multimedia Graphic Design Certificates

Business for Creatives Certificate

Requirements

Required Courses

MGD 2068	Business for Creatives	3
SBM 1003	Legal Aspects-Small Business	1
SBM 1006	Recordkeeping-Small Business	1
SBM 1012	Financing a Small Business	1

TOTAL CREDIT HOURS: 6

Introduction to Graphic Design Certificate

Requirements

Required Courses

MGD 1012	Adobe Illustrator I	3
MGD 1013	Adobe InDesign	3
MGD 1014	Typography I	3

TOTAL CREDIT HOURS: 9

Graphic Design/Print Production Certificate

The graphic design/print production emphasis prepares you for a career in printing, graphic design, and prepress production. As an established industry, there are many job opportunities in the Denver Metro area in graphic design. The Graphic Design and Print Production certificate can be combined with the Video Production AAS Degree to add additional marketable skills to the traditional AAS degree.

Requirements

Required Courses

MGD 1002	Introduction To Multimedia	3
MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1013	Adobe InDesign	3
MGD 1014	Typography I	3
MGD 2002	Point of Purch Package Design	3
MGD 2013	Electronic Prepress	3

TOTAL CREDIT HOURS: 21

Graphic Design - Intro to Web Design

Certificate

Requirements

Required Courses

MGD 1011	Adobe Photoshop I	3
MGD 1041	Web Design I	3
MGD 1043	Motion Graphic Design I: Software	3

TOTAL CREDIT HOURS: 9

Graphic Design - Advanced Web Design

Certificate

Requirements

Requirements List

MGD 1011	Adobe Photoshop I	3
MGD 1041	Web Design I	3
MGD 1043	Motion Graphic Design I: Software	3
MGD 2041	Web Design II	3
MGD 2042	Web Architecture: Open Source	3
MGD 2043	Web Motion Graphic Design II	3
MGD 2058	User Experience/User Interface Design (UX/UI)	3

TOTAL CREDIT HOURS: 21

Multimedia Graphic Design Degrees

Graphic Design and Print Production AAS Degree

The Graphic Design/Print Production emphasis within the Visual, Audio, and Media Department prepares you to work in the traditional graphic design and printing industries. You will develop designs for electronic production for both digital and traditional press. In addition, you will learn design techniques for packaging and point of sale and other forms of print media. Printing press technology is also addressed.

Requirements

Required Courses

MGD 1009	Design & Color	3
MGD 1011	Adobe Photoshop I	3
MGD 1012	Adobe Illustrator I	3
MGD 1013	Adobe InDesign	3
MGD 1014	Typography I	3
MGD 1033	Graphic Design I	3
MGD 2011	Adobe Photoshop II	3
MGD 2044	Integrated Multimedia Dev	3
MGD 2089	Capstone	3
		Subtotal: 27

General Education Courses

ART 1201	Drawing I	3
ART 1401	Digital Photography I	3
ENG 1031	Technical Writing I: CO1	3
MAT 1140	Career Math or higher	3
MAT 1240	MAT 1240 Math for Liberal Arts recommended	4
PSY 2221	Social Psychology: SS3	3
		Subtotal: 15

MGD Approved Electives (18 credits)

3 credits from the following:

MGD 2068	Business for Creatives or	3
MGD 2080	Internship	3
		Subtotal: 3

15 credits from the following:

MGD 1004	Videography	3
MGD 1041	Web Design I	3
MGD 1058	Introduction to UI/UX	3
MGD 1063	Sound Design I	3
MGD 1064	Digital Video Editing I	3
MGD 1065	After Effects I	3
MGD 2002	Point of Purch Package Design	3
MGD 2012	Adobe Illustrator II	3
MGD 2013	Electronic Prepress	3
MGD 1021	Painter for Digital Media	3
MGD 2033	Graphic Design II	3
		Subtotal: 15

TOTAL CREDIT HOURS: 60

Simulation and Game Design AAS Degree

The Simulation & Game Design program explores animation, visual effects, game design, 2D arts, 3D arts, UI/UX design & development, augmented reality, virtual reality, and mixed reality. This program will apply the latest design applications for print (2D and 3D), computers, consoles, and mobile devices while including future technology and methodologies.

Degree Requirements

Required Courses

MGD 1011	Adobe Photoshop I	3
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MGD 1012	Adobe Illustrator I	3
MGD 1019	Maya I	3
MGD 1021	Painter for Digital Media	3
MGD 1022	Sculpting for Digital Media	3
MGD 1042	Digital Animatics	3
MGD 1063	Sound Design I	3
MGD 1064	Digital Video Editing I	3
MGD 1065	After Effects I	3
MGD 2019	Maya II	3
MGD 2020	Adv. Character Rigging	3
MGD 2089	Capstone	3
		Subtotal: 36

General Education Courses

ART 1201	Drawing I	3
ART 1401	Digital Photography I	3
ENG 1031	Technical Writing I: CO1	3
MAT 1140	Career Math or higher	3
MAT 1240	MAT 1240 Math for Liberal Arts recommended	4
PSY 2221	Social Psychology: SS3	3
		Subtotal: 15

Electives

Choose 9 credits from the following:

MGD 1025	3D Modeling for Gaming:	3
MGD 1053	3D Animation I	3
MGD 1067	Game Design I	3
MGD 2052	Game Design for Mobile Devices	3
MGD 2053	3DAnimation II	3
MGD 2057	Animation Production	3
MGD 2067	Game Design II	3
		Subtotal: 9

TOTAL CREDIT HOURS: 60

Music

www.rccc.edu/music

Certificate

Music Audio Production

Music Audio Production Certificate

Certificate Requirements

Requirements List

MUS 1005	Intro Comp Music Applications	3
MUS 1010	Music Theory I	3
MUS 1012	Ear Training/Sightsing I Lab	1
MUS 1041	Private Instruction: (specify)	1
MUS 1042	Private Instruction: (specify)	1
MUS 1061	Computer Music Applications I	3
MUS 1067	Music Business I	3
MUS 2061	Adv Music Audio Production	3
MUS 2065	Live Audio Engineering	3
MUS 2089	Capstone	0-12

TOTAL CREDIT HOURS: 26

Nurse Aide

www.rccc.edu/health-sciences

Certificate

Nurse Aide (p. 125)

Nurse Aide Certificate

Lifting requirement. Open enrollment with one of the following acceptance requirements documented with Red Rocks Community College: Appropriate placement scores or SAT verbal score of 440 or higher or ACT English score of 18 or higher or CCR 0094 with a C or higher. Additional required information and forms (e.g. criminal background check, immunization records, physician's statement, and drug screen) can be found at www.rccc.edu/health-careers. Register for the NUA 1070 clinical section that corresponds to the NUA 1001 class. You must pass NUA 1001 with a grade of C or higher in order to participate in the NUA 1070 clinical rotation. You must pass both NUA 1001 and NUA 1070 with a grade of C or higher in order to receive a certificate of completion.

For the step-by-step Nursing Assistant Enrollment process, please visit our website at: www.rccc.edu/nurse-aide/admissions.

Requirements

Required Courses

NUA 1001	Nurse Aide Health Care Skills	4
NUA 1070	Nurse Aide Clinical Experience	1
TOTAL CREDIT HOURS: 5		

Nursing

www.rccc.edu/health-sciences

RN Refresher Program

www.rccc.edu/nursing-programs

The RN Refresher program at Red Rocks Community College is designed for registered nurses who want to return to practice nursing but need a refresher. The field of nursing has changed as healthcare systems have evolved. In order to return to the workforce, an individual needs to possess current knowledge and skills about the practice of nursing. Requirements for this program: A current Colorado RN license, or a license to be reinstated, proof of immunizations, Health Care Provider – BLS certification, and a letter from a physician stating you are physically and mentally able to participate in this course. You must pass NUR 2090, and NUR 2091 and NUR 1070 with a grade of C or higher in order to receive a Certificate of Completion. Please see the website for a separate application to the program.

Requirements

Required Courses

NUR 2090	RN Refresher Course	8
NUR 2091	RN Refresher Course Clinical	2
NUR 1070	Clinical I	1
TOTAL CREDIT HOURS: 11		

Integrated Pathway in Nursing Degree

Red Rocks Community College and the University of Colorado's College of Nursing offer a unique, integrated pathway to earn a Bachelor of Science degree in Nursing. The Integrated Nursing Pathway (INP) program provides outstanding preparation for professional nursing practice. Designed to increase access for community college students to a B.S. degree in Nursing. This pathway emphasizes the value of a diverse student population as a way to achieving excellence in practice that is reflective of the cultural diversity of health care recipients.

- Students will learn, study, and support each other throughout the program as a cohort group.
- Expert faculty and staff will be available to offer ongoing support and provide the best learning opportunities for successful completion.
- Students will complete their first year in the Integrated Nursing program at the new, state-of-the-art Arvada Campus.

- Students are required to successfully complete specific prerequisite courses in preparation for application to the Integrated Nursing Pathway program.
- Students must maintain a grade point average of a minimum of 3.0 overall for the prerequisite coursework.
- The minimum acceptable grade for prerequisite courses is a "C" (overall prerequisite GPA must be at least 3.0).
- 15 students accepted each year. Program starts fall semester.
- Selection will be based on prerequisite GPA, personal statement on application, statements from two references (one academic), interview, group activity, and taking coursework at Colorado Community Colleges and Colorado residency at time of application.
- Not open to students who have an RN, LPN, PSY Tech or any bachelor degree.

Prerequisites

Note: Grades for all prerequisites must be a C or higher taken within last 10 years (with the exception of ENG 1021). Cumulative GPA for all prerequisite courses must be at least 3.0

Required

CHE 1011	Intro to Chemistry I/Lab: SC1	5
ENG 1021	English Composition I: CO1	3
MAT 1340	College Algebra: MA1	4
MAT 1260	Intro to Statistics: MA1	3
COM 2300	Intercultural Comm: SS3	3
SOC 1001	Intro to Sociology I: SS3	3
BIO 1111	Gen College Biology I/Lab: SC1	5
PSY 1001	General Psychology I: SS3	3
HWE 1050	Human Nutrition	3

Arts and Humanities

Choose 3 credits from Statewide GT (Guaranteed Transfer) courses GT-AH1 or GT-AH2. See GT Courses (p. 76)

Subtotal: 35

Requirements

Application to INP program and start of INP pathway

Subtotal: 62

Semester 1 - (RRCC)

BIO 2101	Human Anatomy & Phys I w/Lab: SC1	4
BIO 2104	Microbiology w/Lab: SC1	4
ENG 1022	English Composition II: CO2	3
PHI 1012	Ethics:AH3	3

Semester 2 - Spring (RRCC)

BIO 2102	Human Anatomy & Phys II w/Lab: SC1	4
ANT 2550	Medical Anthropology:SS3	3
PSY 2440	Human Growth & Developmnt: SS3	3
HIS 2015	20th Century World History:HI1	3

Graduation from RRCC and transition to UC-CON at AMC

Subtotal: 32

Semester 3 - Summer (UC-CON)

NURS 3001	
NURS 3103	

Semester 4 - Fall (UC-CON)

NURS 3002	
NURS 3003	
NURS 3617	

Semester 5 - Spring (UC-CON)

NURS 4020	
NURS 3307	
NURS 3507	

Semester 6 - Summer (UC-CON)

NURS 4051	
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NURS 3407

Semester 7 - Fall (UC-CON)

NURS 4097
NURS 4207

Semester 8 - Spring (UC-CON)

NURS 4128
NURS 4070

Graduation from the University of Colorado College of Nursing with a Bachelor of Science Degree in Nursing

**UC-CON curriculum subject to change*

TOTAL CREDIT HOURS: 126

Outdoor Recreation Leadership

www.rccc.edu/outdoor-education 303-914-6238

Certificates

- Facilitation/Education Specialist (p. 127)
- Fundamentals of Outdoor Leadership (Warren Tech) (p. 126)
- Introduction to Outdoor Education (p. 126)
- Outdoor Industry Business/Management (p. 127)
- The Outdoor Professional (p. 127)
- Wilderness Therapy Specialist (p. 127)

Degree: Associate of Applied Science

- Outdoor Recreation Leadership (p. 128)

Outdoor Recreation Leadership Certificates

By completing the Outdoor Education Certificate Program, you will have a well-rounded outdoor education experience and a high degree of training specific to employment within the outdoor industry. Types of organizations that may employ graduates include recreation facilities, outfitters and guide services, ski areas, summer adventure camps, community nature centers and outdoor programs, whitewater river outfitters, outdoor equipment purveyors, and other outdoor education and/or recreation companies and organizations. In addition to field-based experiential learning of basic technical skills, you will be prepared to be a future outdoor trip leader by examining and developing the interpersonal skills needed for positions in outdoor leadership.

Each certificate requires a set of core courses and elective groupings specific to the area of concentration. These certificates are designed to prepare the student to incorporate a more focused emphasis area within outdoor education as well as include other more interdisciplinary emphasis areas that incorporate other subject areas into the curriculum. One certificate is required as part of the AAS degree requirements. The Introduction to Outdoor Education does not meet the AAS degree certificate requirement but the courses will apply to other certificates.

Fundamentals of Outdoor Leadership Certificate (Warren Tech)

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRCC students pursuing certain career and technical college degrees/certificates may take courses (on a space-available basis) at Warren Tech (WT), which is adjacent to the RRCC campus. You must have either graduated from high school, received a GED, or attained the age of 21. You pay RRCC tuition and WT program fees and your coursework is recorded on your RRCC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start and end dates differ from those of RRCC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m. For more information, see Warren Tech Students on page 12.

Requirements

Required Courses

OUT 1030	Orienteering and Routefinding	2
OUT 1200	Wilderness Ethics	2
OUT 1205	Leave No Trace Trainer Cert	2
OUT 1210	Risk Mgmt of Outdoor Prof	1
OUT 1540	Challenge Course Facilitation	2
OUT 2043	Wilderness First Aid	1
PRA 2018	Outdoor Leadership	3
		Subtotal: 13

Electives: OUT Courses (Choose 8 Credits)

OUT 1010	Wilderness Survival Skills	3
OUT 1050	Backcountry Cooking	1
OUT 1110	Colorado Fourteeners	2
OUT 1120	Backpacking	2
OUT 1125	Mountain Orientation	2
OUT 1130	Desert Orientation	2
OUT 1160	Mountain Biking	1
OUT 1510	Rock Climbing I	2
OUT 1605	Introduction to Winter Sports	1
OUT 1685	Snow Orientation	2
OUT 2075	Special Topics	1-4
		Subtotal: 8
		TOTAL CREDIT HOURS: 21

Introduction to Outdoor Education Certificate

Requirements

Required Courses

OUT 1205	Leave No Trace Trainer Cert	2
OUT 1210	Risk Mgmt of Outdoor Prof	1
OUT 2044	Wilderness First Responder	4
PRA 2018	Outdoor Leadership	3
		Subtotal: 10

Electives

Any Outdoor Studies-OUT course (<i>EXCEPT OUT 1100</i>) and the following Park Ranger (PRA) course:		
PRA 1075	Special Topics	3
		Subtotal: 6
		TOTAL CREDIT HOURS: 16

Outdoor Professional Certificate

The Outdoor Professional Certificate is for those who are seeking a career as a field guide or outdoor instructor in a variety of environments in the outdoor industry. This certificate focuses on understanding industry standards, examining interactions with clients, and experiential learning through field experiences.

Requirements

Required Courses

OUT 1030	Orienteering and Routefinding	2
OUT 1205	Leave No Trace Trainer Cert	2
OUT 1210	Risk Mgmt of Outdoor Prof	1
OUT 2044	Wilderness First Responder	4
PRA 2018	Outdoor Leadership	3
REC 2010	Principles Outdoor Recreation	3
		Subtotal: 15

Choose 16 credits from the following:

Any OUT-Outdoor Studies course (*EXCEPT OUT 1100*) and the following Park Ranger (PRA) and Recreation (REC) courses:

PRA 1075	Special Topics	3
PRA 2085	Independent Study	3
REC 2012	Outdoor Recreation Programming	3
		Subtotal: 16
TOTAL CREDIT HOURS: 31		

Outdoor Industry Business/Management Certificate

The Outdoor Industry Business/Management Certificate is for those who are seeking a career in the outdoor industry that focuses on business practices. This includes management, ownership, marketing, administrative duties, and more. The certificate will better prepare an individual with the skills necessary to properly operate and manage a business related to the outdoor industry.

Requirements

Required Courses

OUT 1205	Leave No Trace Trainer Cert	2
OUT 1210	Risk Mgmt of Outdoor Prof	1
OUT 2044	Wilderness First Responder	4
PRA 2018	Outdoor Leadership	3
REC 2010	Principles Outdoor Recreation	3
REC 2012	Outdoor Recreation Programming	3
		Subtotal: 16

Electives: BUS/ACC/MAN/MAR Courses (Choose 6 Credits)

BUS 1002	Entrepreneurial Operations	3
BUS 1015	Introduction to Business	3
BUS 2016	Legal Environment of Business	3
ACC 1001	Fundamentals of Accounting	3
MAN 1028	Human Relation-Organizations	3
MAN 2000	Human Resource Management I	3
MAN 2024	Leadership	3
MAR 2016	Principles of Marketing	3

OR the Small Business Start Up Certificate (8 Credits) all courses listed below

SBM 1001	Starting a Small Business	1
SBM 1003	Legal Aspects-Small Business	1
SBM 1006	Recordkeeping-Small Business	1
SBM 1008	Marketing for a Small Business	1
SBM 1010	Managing a Small Business	1
SBM 1012	Financing a Small Business	1
SBM 1013	Writing a Business Plan	1
SBM 1075	Special Topics	1-3
or		
MAN 1017	Time Management	1
or		

faculty advisor-approved program or elective (1)

Subtotal: 6

Electives (Choose 9 Credits)

Any Outdoor Studies-OUT course (*EXCEPT OUT 1100*) and the following Park Ranger (PRA) courses:

PRA 1075	Special Topics	3
PRA 2085	Independent Study	3
		Subtotal: 9
TOTAL CREDIT HOURS: 31		

Wilderness Therapy Specialist Certificate

The Wilderness Therapy Specialist Certificate is for students who are seeking a career that uses wilderness as a therapeutic process to help those in need. This certificate focuses on theory within psychology and sociology as well as experiential learning in the outdoors through field courses.

Requirements

Required Courses

OUT 1030	Orienteering and Routefinding	2
OUT 1205	Leave No Trace Trainer Cert	2
OUT 1210	Risk Mgmt of Outdoor Prof	1
OUT 2044	Wilderness First Responder	4
OUT 2077	Special Topics	3
PRA 2018	Outdoor Leadership	3
		Subtotal: 15

Electives: PSY/SOC Courses

(Choose 9 Credits from the following General Education approved subject areas which will function as electives but are not occupational core to the program)

PSY 1001	General Psychology I: SS3	3
PSY 1002	General Psychology II : SS3	3
PSY 2112	Intro to Addictive Behavior	2
PSY 2331	Positive Psychology: SS3	3
PSY 2771	Psychology of Personality: SS3	3
SOC 1001	Intro to Sociology I : SS3	3
SOC 2031	Sociology-Deviant Behavior:SS3	3
SOC 2065	Violence and Culture	3
		Subtotal: 9

Electives (Choose 7 Credits):

Any Outdoor Studies-OUT course (*EXCEPT OUT 1100*) and the following Park Ranger (PRA) and Recreation (REC) courses:

PRA 1075	Special Topics	3
PRA 2085	Independent Study	3
REC 2012	Outdoor Recreation Programming	3
		Subtotal: 7
TOTAL CREDIT HOURS: 31		

Facilitation/Education Specialist Certificate

The Facilitation/ Education Specialist Certificate is designed for students who are seeking a career in experiential education and facilitation. The certificate focuses on theory and principles related to effectively educating and teaching others while also emphasizing experiential learning through outdoor based field courses.

Requirements

Required Courses

OUT 1205	Leave No Trace Trainer Cert	2
OUT 1210	Risk Mgmt of Outdoor Prof	1
OUT 1540	Challenge Course Facilitation	2
OUT 2044	Wilderness First Responder	4
PRA 2005	Resource Interpretation	3

PRA 2018	Outdoor Leadership	3
PRA 2055	Adv Resource Interpretation	3
REC 2010	Principles Outdoor Recreation	3
		Subtotal: 21

Electives

Choose 10 Credits from the following. No more than 4 credits outside of OUT, PRA, REC

Any Outdoor Studies-OUT course (Except OUT 1100) and the following Park Ranger (PRA) and Recreation (REC) courses:

PRA 1075	Special Topics	3
PRA 2085	Independent Study	3
REC 2012	Outdoor Recreation Programming	3
		Subtotal: 10

Any of the following Genera Education approved subject areas

The following subject areas will function as electives but are not occupational core to the program:

MET 1050	Gen Meteorology w/Lab: SC1	4
MET 1051	Intro to Climatology	3
GEY 1135	Environmental Geol w/Lab: SC1	4
GEY 2205	Geology of Colorado	3
AST 1001	Colorado Night Sky I	1
AST 1002	Colorado Night Sky II	1
ENV 1111	Environmental Sci w/Lab: SC1	4
GEO 1011	Phys Geo: Lndfrms w/Lab: SC1	4
HIS 2125	American Environment Hist: GT-HI1	3
PHI 2018	Environmental Ethics: GT-AH3	3
		TOTAL CREDIT HOURS: 31

Outdoor Education Degrees

Outdoor Recreation Leadership AAS Degree

The AAS degree is for those who are preparing for entry-level employment in a career-oriented program of study or who are upgrading skills in a specific occupation. This degree is not intended for transfer; however, courses are considered for transfer on an individual basis by the receiving college or university.

Individual departments may specify particular courses for general education. Meet with an advisor for a degree worksheet.

Degree Requirements

Required General Education Courses

ENG/COM	1000 or higher	3
MAT 1140	Career Math or higher	3
		Subtotal: 6

Choose 6 credits (TWO courses) from the following (1000 and above):

Arts and Humanities:

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences:

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI

Social and Behavioral Science:

ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

Subtotal: 6

Choose an additional 3 credits from:

any of the above prefixes or CIS 1018 (p. 162)

Subtotal: 3

Required Core Courses

OUT 1087	Cooperative Education Internsh	3
OUT 1200	Wilderness Ethics	2
REC 1000	Introduction to Recreation	2
		Subtotal: 7

Elective Courses

(Must select 8 credits from the following courses. Courses must not duplicate any certificate courses.)

Any Outdoor Studies-OUT course (EXCEPT OUT 1100) and the following Park Ranger (PRA) and Recreation (REC) courses:

PRA 1075	Special Topics	3
PRA 2085	Independent Study	3
REC 2012	Outdoor Recreation Programming	3
		Subtotal: 8

Additional Requirements

In addition to the requirements above, you must complete 31 credits from one of the following Certificates:

Outdoor Professional Certificate (31) (p. 127)	
Outdoor-Business-Management-Certificate (31) (p. 127)	
Wilderness Therapy Specialist Certificate (31) (p. 127)	
Facilitation/Education Specialist Certificate (31) (p. 127)	
Subtotal: 31	
TOTAL CREDIT HOURS: 61	

Park Ranger Technology

www.rccc.edu/park-ranger-technology

Information: 303-914-6238

The Park Ranger Technology (Recreation Management) Program provides training for those seeking careers in natural resource protection, interpretation, and management. Law enforcement, natural resource interpretation, public safety services, and outdoor recreation/education are the major areas of concentration, reflecting the needs of the industry and potential employment in all levels of government as well as private companies. To become a full-time professional Park Ranger, most hiring agencies have three basic requirements: 1) a bachelor's degree from an accredited institution of higher learning; 2) basic park ranger knowledge and skills; 3) seasonal park ranger employment experience. The Park Ranger Technology certificate programs are designed around all agency requirements and allows you to design a program around specific interests, career goals, and previous training or education, and is appropriate for the following individuals:

- Students with a high school diploma, or some college, wishing to begin a program of study to prepare them for employment as a professional Park Ranger. In addition to the Certificate of Concentration, the program advisor will help you design an appropriate two-year associate degree that can be transferred to a four-year institution.
- Students seeking part-time or full-time seasonal employment as a Park Ranger with an agency (local, state, or federal) which may not require a four-year degree. Students must first consult with the program advisor before beginning any program of study.
- Students who already have a four-year degree in an unrelated field and who wish to make a career change.

Certificates

- Introduction to Park Ranger Technology (p. 129)
- Park Ranger Specialist (p. 129)
- Natural Resource Interpretation (p. 129)

Degree: Associate of Applied Science

- Park Ranger Technology (p. 129)

Park Ranger Technology Certificates

TOTAL CREDIT HOURS: 32

Introduction to Park Ranger Technology Certificate

The Introduction to Park Ranger Technology Certificate is for those who have an interest in becoming a Park Ranger and who would like to have more information about this career field in order to make a definitive decision.

Certificate Requirements

Required Courses

PRA 1002	Intro to Park Ranger Tech	3
PRA 2003	Natural Resource Management	3
TOTAL CREDIT HOURS: 6		

Park Ranger Specialist Certificate

The Park Ranger Specialist Certificate is for those working in a front or back country setting. Focus is on park ranger skills, medical training and outdoor/environmental theory.

Certificate Requirements

Required Courses

OUT 1205	Leave No Trace Trainer Cert	2
OUT 1210	Risk Mgmt of Outdoor Prof	1
OUT 1215	Trail Design & Construction	1
PRA 1002	Intro to Park Ranger Tech	3
PRA 1078	Park Ranger Skills Seminar	6
PRA 2003	Natural Resource Management	3
PRA 2005	Resource Interpretation	3
PRA 2080	Park Ranger Internship	3
Subtotal: 22		

Medical Science Courses

Choose either OUT 2044 or EMS 1015 and one HPR or HWE course

OUT 2044	Wilderness First Responder	4
EMS 1015	Emergency Medical Responder	3
HPR 1010	Dietary Nutrition	1
HPR 1011	CPR for Professionals	0.5
HPR 1026	Outdoor Emergency Care Refresh	0.5
HPR 2013	Pediatric Adv Life Support	1
Subtotal: 4		

Elective Courses

Choose 6 credits from the following:

AST 1001	Colorado Night Sky I	1
AST 1002	Colorado Night Sky II	1
AST 1003	Colorado Night Sky III	1
FSW 1000	S-190 Intro to Wildland Fire	1
FSW 1001	S-130 Firefighting Training	2
GEY 1012	Plate Tectonics	1
GEY 1016	Geology of Minerals and Gems	1
GEY 1018	Rock & Mineral Identification	1
GEY 1034	Oil and Gas Geology	1
GEY 1042	Intro to GPS	1
OUT 1010	Wilderness Survival Skills	3
OUT 1030	Orienteering and Routefinding	2
OUT 1120	Backpacking	2
OUT 1200	Wilderness Ethics	2
OUT 1250	Survival Plants in Summer I	2
OUT 1255	Survival Plants in the Fall	2
OUT 1260	Survival Plants in Spring I	2
OUT 1585	Swift Water Rescue Tech I	1
PRA 2018	Outdoor Leadership	3
Subtotal: 6		

The General Education approved subject areas will function as electives but are not occupational core to the program.

Natural Resource Interpretation Certificate

The Natural Resource Interpretation Certificate is for those working with resource interpretation, naturalists, and/or other nature center work with the public.

Certificate Requirements

Required Courses

PRA 1002	Intro to Park Ranger Tech	3
PRA 2003	Natural Resource Management	3
PRA 2005	Resource Interpretation	3
PRA 2018	Outdoor Leadership	3
OUT 1205	Leave No Trace Trainer Cert	2
OUT 1210	Risk Mgmt of Outdoor Prof	1
PRA 2055	Adv Resource Interpretation	3
PRA 2080	Park Ranger Internship	3
REC 2010	Principles Outdoor Recreation	3
Subtotal: 24		

Health Sciences Courses

OUT 2044	Wilderness First Responder	4
	or	
EMS 1015	Emergency Medical Responder	3
Subtotal: 3-4		

AND Choose 1 credit from the following:

HPR 1010	Dietary Nutrition	1
HPR 1011	CPR for Professionals	0.5
HPR 1026	Outdoor Emergency Care Refresh	0.5
HPR 2013	Pediatric Adv Life Support	1
Subtotal: 1		

Elective Courses

Choose 4 credits from the following:

OUT 1200	Wilderness Ethics	2
OUT 1250	Survival Plants in Summer I	2
OUT 1255	Survival Plants in the Fall	2
OUT 1260	Survival Plants in Spring I	2
OUT 1540	Challenge Course Facilitation	2
AST 1001	Colorado Night Sky I	1
AST 1002	Colorado Night Sky II	1
AST 1003	Colorado Night Sky III	1
GEY 1016	Geology of Minerals and Gems	1
GEY 1018	Rock & Mineral Identification	1
GEY 1012	Plate Tectonics	1
GEY 1034	Oil and Gas Geology	1
GEY 1042	Intro to GPS	1
GIS 1001	Introduction to GIS	3
GER 1001	Conversational German I	3
FRE 1001	Conversational French I	3
ITA 1001	Conversational Italian I	3
JPN 1001	Conversational Japanese I	3
RUS 1001	Conversational Russian I	3
SPA 1001	Conversational Spanish I	3
PRA 2080	Park Ranger Internship	3
Subtotal: 4		

The General Education approved subject areas will function as electives but are not occupational core to the program.

TOTAL CREDIT HOURS: 32

Park Ranger Technology Degrees

Park Ranger Technology AAS Degree

The AAS degree is for those who are preparing for entry-level employment in a career-oriented program of study or who are upgrading skills in a specific occupation. This degree is not intended for transfer; however, courses are considered for transfer on an individual basis by the receiving college or university.

Individual departments may specify particular courses for general education. Meet with an advisor for a degree worksheet.

Degree Requirements

General Education Courses

Choose 6 credits (TWO courses) from the following (1000 and above): ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE, AST, BIO, CHE, ENV, GEY, MET, PHY, SCI, ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC

Choose an additional 3 credits from any of the above prefixes or CIS 1018 (p. 162)

AND the following:

ENG/COM	1000 or higher	3
MAT 1140	Career Math or higher	3
		Subtotal: 15

Program Requirements

OUT 1030	Orienteering and Routefinding	2
		Subtotal: 2

Natural and Physical Science Electives

(Must select 5 credits from the following courses. Courses must not duplicate any certificate courses.)

BIO 1111	Gen College Biology I/Lab: SC1 or	5
ENV 1111	Environmental Sci w/Lab: SC1	4
		Subtotal: 4-5

And 1 Credit From the Following:

AST 1001	Colorado Night Sky I	1
AST 1002	Colorado Night Sky II	1
AST 1003	Colorado Night Sky III	1
GEY 1012	Plate Tectonics	1
GEY 1016	Geology of Minerals and Gems	1
GEY 1018	Rock & Mineral Identification	1
GEY 1034	Oil and Gas Geology	1
GEY 1042	Intro to GPS	1
		Subtotal: 1

General Electives

Choose 6 credits, only 3 can be OUT elective credits. Courses must not duplicate any certificate courses.

PRA 2055	Adv Resource Interpretation	3
REC 1000	Introduction to Recreation	2
REC 2010	Principles Outdoor Recreation	3
REC 2012	Outdoor Recreation Programming	3
GIS 1001	Introduction to GIS	3
GIS 2010	Intermediate GIS	3
GER 1001	Conversational German I	3
FRE 1001	Conversational French I	3
ITA 1001	Conversational Italian I	3
JPN 1001	Conversational Japanese I	3
RUS 1001	Conversational Russian I	3
SPA 1001	Conversational Spanish I	3
BIO 1112	Gen College Biology II/Lab:SC1	5
OUT 1010	Wilderness Survival Skills	3
OUT 1050	Backcountry Cooking	1
OUT 1069	Avalanche Awareness Level II	2
OUT 1075	Special Topics	1-4
OUT 1120	Backpacking	2
OUT 1125	Mountain Orientation	2
OUT 1130	Desert Orientation	2
OUT 1135	Canyon Orientation	2
OUT 1160	Mountain Biking	1
OUT 1200	Wilderness Ethics	2
OUT 1250	Survival Plants in Summer I	2
OUT 1255	Survival Plants in the Fall	2
OUT 1260	Survival Plants in Spring I	2
OUT 1274	Survival Plants: Summer II	3
OUT 1300	Kayaking	1
OUT 1330	River Orientation	2
OUT 1350	Flyfishing I	1
OUT 1385	Scuba Diving	1
OUT 1390	Assistant Scuba Instructor	3
OUT 1510	Rock Climbing I	2

OUT 1520	Ice Climbing I	1
OUT 1530	Technical Canyoneering	2
OUT 1540	Challenge Course Facilitation	2
OUT 1550	Mountaineering	3
OUT 1585	Swift Water Rescue Tech I	1
OUT 1600	Winter/Wilderness Surviv Skills	2
OUT 1605	Introduction to Winter Sports	1
OUT 1649	Alpine Skiing I	1
OUT 1651	Snowshoeing	1
OUT 1652	Snowboarding I	1
OUT 1670	Avalanche Safety I	1
OUT 1685	Snow Orientation	2
OUT 2002	Open Water Diver	1
OUT 2003	Advanced Open Water Diver	2
OUT 2005	Divemaster	3
OUT 2007	Open Water Scuba Instructor	3
OUT 2050	Alpine Ski Instructor I	2
OUT 2051	Snowboard Instructor I	2
OUT 2255	Survival Plants: Fall II	3
OUT 2260	Survival Plants: Spring II	3
OUT 2075	Special Topics	1-4
OUT 2300	Rescue Diver	2
OUT 2305	Paddle Sports	2
OUT 2310	White Water Rafting Guide	2
OUT 2510	Rock Climbing II	2
OUT 2520	Ice Climbing II	1
OUT 2640	Alpine Skiing II	1
OUT 2650	Snowboarding II	1
		Subtotal: 6

Additional Requirements

In addition to the requirements above, you must complete at least one of the following Certificates:

Park Ranger Specialist (p. 129)	
Park Ranger Resource Interpretation (p. 129)	
Subtotal: 32	
TOTAL CREDIT HOURS: 60	

Philosophy

www.rrcc.edu/philosophy

Degree: Associate of Arts

Philosophy AA Degree With Designation (p. 67)

Philosophy AA Degree With Designation

For those planning to transfer to a four-year college or university to complete a major in Philosophy. Consult with a faculty advisor before beginning this area of study.

Philosophy AA Designated Degree Requirements (p. 67)

Phlebotomy

www.rrcc.edu/phlebotomy

This CCHC approved certificate is designed to prepare you to gain employment as a Phlebotomist in the health care industry. You will receive an extensive and varied program of study that includes theory and venipuncture practice. After successful completion of these courses and the Phlebotomy Internship, you are eligible to apply and sit for the national AMT (American Medical Technologist) certification exam. Documentation of at least two Hepatitis B immunizations are required before the start of the HPR 1012 Phlebotomy course. Immunizations, physician approval, and background check/drug screen (at the student's expense) are required before the start of the internship. You must complete a criminal background check and drug screen 60 days prior to enrolling in the internship by using the current RRCC-approved background check/drug screen program. The internship, HPR 1080, must be started within four months of completing HPR 1012. A Laboratory coat or a set of scrubs and a watch are required for this course.

Certificate

Phlebotomy (p. 131)

Phlebotomy Certificate

Certificate Requirements

Courses are taken in consecutive semesters with HPR 144 and HPR 1012 taken first and HPR 1080 taken following completion of HPR 1012 and HPR 1040. You must be at least 18 years old to register for this program. Placement test scores must meet the prerequisite requirement for ENG 1021 or higher or documented previous ENG 090 or college degree. Additionally, the pre/co-requisite is HPR 1040 Comprehensive Medical Terminology.

Required Courses

HPR 1020	Phlebotomy	4
HPR 1040	Comprehensive Medical Terminol	3
HPR 1080	Internship	3
TOTAL CREDIT HOURS:		10

Photography and Videography

www.rccc.edu/photography and www.rccc.edu/videography

The mission of the Journalism, Multimedia Graphics and Design, and the Photography Department is to provide students with opportunities for growth and development that set the foundation for self-directed learning, academic achievement, relevant, real-world training, and career accomplishment for commercial application. We do this through high quality, innovative educational programs using current technical, creative, and software trends in the industry. We convey our passion for learning, our commitment to excellence, and our dedication to our students in the communities we serve. Through critical thinking we prepare our students, both entry level and continuing education to create the necessary skill set in visual communication and production of photographic images, motion, graphics or digital media. Red Rocks Community College offers both associate degrees and certificates in the Visual, Audio, & Media Art programs that will prepare you to enter the work force upon graduation.

Photography Certificates

- Business of Photography (p. 131)
- Introduction to Photography (p. 131)
- Professional Photography (p. 132)
- Professional Photography and Videography (p. 132)

Videography Certificates

- Assistant Camera and Camera Operator (p. 131)
- Business for Creatives (p. 122)
- Grip (p. 131)
- Introduction to Videography (p. 131)
- Professional Photography and Videography (p. 132)
- Sound (p. 132)
- Videography (p. 131)
- Visual Effects and Editing (p. 132)
- Visual Media Production & Talent (p. 132)

Degrees: Associated of Applied Science

- Professional Photography (p. 131)
- Videography (p. 132)

Photography and Videography Certificates

Assistant Camera and Camera Operator Certificate

Designed to give videography students the skills to begin a career in production managing camera gear or to be a camera operator.

Certificate Requirements

Required Courses

FVM 2005	Camera Techniques	3
FVM 2021	Commercial Media Production	3
MGD 1004	Videography	3
MGD 2004	Videography II	3
TOTAL CREDIT HOURS:		12

Business of Photography Certificate

Certificate Requirements

Required Courses

PHO 2187	Business of Photography	3
SBM 1003	Legal Aspects-Small Business	1
SBM 1006	Recordkeeping-Small Business	1
SBM 1012	Financing a Small Business	1
TOTAL CREDIT HOURS:		6

Grip Certificate

Designed to give students the skills to begin a career in production on building and maintaining the set.

Certificate Requirements

Required Courses

FVM 2006	Film/Video Lighting	3
FVM 2021	Commercial Media Production	3
MGD 1004	Videography	3
TOTAL CREDIT HOURS:		9

Introduction to Photography Certificate

You will learn the basics of photography that provide the skills necessary to act as a commercial photographer's assistant. Assisting can be the apprenticeship route to becoming a professional photographer.

Certificate Requirements

Required Courses

PHO 1021	Image Capture I	3
PHO 1061	Digital Capture Processing I	3
TOTAL CREDIT HOURS:		6

Introduction to Videography Certificate

Designed to give students the basic skills to create video projects as a hobby or to make an educated decision on their career path in videography and production.

Certificate Requirements

Required Courses

MGD 1004	Videography	3
MGD 1064	Digital Video Editing I	3
TOTAL CREDIT HOURS:		6

Videography Certificate

Designed to give students the fundamental skills to begin a career in commercial videography.

Certificate Requirements

TOTAL CREDIT HOURS: 15

Required Courses

FVM 2021	Commercial Media Production	3
MGD 1004	Videography	3
MGD 1063	Sound Design I	3
MGD 1064	Digital Video Editing I	3
MGD 1065	After Effects I	3
MGD 2004	Videography II	3
MGD 2064	Digital Video Editing II	3
MGD 2068	Business for Creatives	3
MGD 2089	Capstone	3

TOTAL CREDIT HOURS: 27

Professional Photography Certificate

You will learn techniques in digital photography, such as camera, print production, lighting, equipment, and business management. You will use a digital SLR camera or mirrorless digital camera with manual settings.

Certificate Requirements

Required Courses

PHO 1021	Image Capture I	3
PHO 1022	Image Capture II	3
PHO 1061	Digital Capture Processing I	3
PHO 1062	Digital Capture Processing II	3
PHO 2004	Commercial Studio Lighting	3
PHO 2069	Professional Inkjet Print II	3
PHO 2187	Business of Photography	3
PHO 2188	Portfolio & Career Exploration	3

TOTAL CREDIT HOURS: 24

Professional Photography and Videography Certificate

Designed to give students the fundamental skills for entry-level employment or as contracted labor in the field of professional photography with integration of videography.

Certificate Requirements

Required Courses

MGD 1004	Videography	3
MGD 1064	Digital Video Editing I	3
MGD 1065	After Effects I	3
PHO 1021	Image Capture I	3
PHO 1022	Image Capture II	3
PHO 1061	Digital Capture Processing I	3
PHO 1062	Digital Capture Processing II	3
PHO 2004	Commercial Studio Lighting	3
PHO 2069	Professional Inkjet Print II	3
PHO 2187	Business of Photography	3

TOTAL CREDIT HOURS: 33

Sound Certificate

Designed to give students the skills to begin a career as sound production assistant, boom operator, or field recording mixer.

Certificate Requirements

Required Courses

FVM 2021	Commercial Media Production	3
MGD 1004	Videography	3
MGD 1063	Sound Design I	3
MGD 2063	Sound Design II	3
MGD 2089	Capstone	3

Visual Effects and Editing Certificate

Designed to give students the skills to apply visual effects and editing in post-production.

Certificate Requirements

Required Courses

FVM 2021	Commercial Media Production	3
MGD 1011	Adobe Photoshop I	3
MGD 1014	Typography I	3
MGD 1064	Digital Video Editing I	3
MGD 1065	After Effects I	3
MGD 2064	Digital Video Editing II	3
MGD 2065	After Effects II	3

TOTAL CREDIT HOURS: 21

Visual Media Production & Talent Certificate

Certificate Requirements

Requirements List

FVM 1005	Video Production I	3
FVM 1017	Understanding Actor's Process	3
FVM 1036	Short Script Analysis	3
FVM 1050	Development Film Expression	3
FVM 1063	Digital Editing: Premiere	3
FVM 2007	Directing Workshop	3
FVM 2021	Commercial Media Production	3
FVT 2050	Scriptwriting for Film & Video	3

TOTAL CREDIT HOURS: 24

Photography Degrees

Professional Photography AAS Degree

The Professional Photography AAS degree prepares you for a career as a professional photographer. You will learn techniques that include camera operation, print production, lighting, equipment, and business management, including the history of photography. You will use a digital SLR camera or a mirrorless digital camera with manual settings.

Degree Requirements

Required Courses

JOU 1021	Photojournalism	3
PHO 1021	Image Capture I	3
PHO 1022	Image Capture II	3
PHO 1043	Perception & Photography I	3
PHO 1061	Digital Capture Processing I	3
PHO 1062	Digital Capture Processing II	3
PHO 2004	Commercial Studio Lighting	3
PHO 2032	Professional Portraiture	3
PHO 2035	Architectural Photography	3
PHO 2069	Professional Inkjet Print II	3
PHO 2044	New Media Storytelling	3
PHO 2187	Business of Photography	3

Subtotal: 39

General Education Courses

MAT 1140	Career Math	3
ENG 1031	Technical Writing I: CO1	3
PSY 2221	Social Psychology: SS3	3
ART 1115	History of Photography	3
ART 1201	Drawing I	3

Subtotal: 15

Electives

Choose 6 credits from the following:

MGD 1013	Adobe InDesign	3
PHO 1055	Photog of the Human Form I	3
PHO 2052	Glamour & Fashion Photography	3
PHO 2060	Events and Wedding Photography	3
PHO 2059	Extreme Adventure Photography	3
PHO 2080	Internship	3
PHO 2070	Field Techniques & Exploration	1

Subtotal: 6

TOTAL CREDIT HOURS: 60

Videography AAS Degree

Designed to give student the foundation to start a business in commercial videography.

Degree Requirements

Required Courses

FVM 2005	Camera Techniques	3
FVM 2006	Film/Video Lighting	3
FVM 2021	Commercial Media Production	3
MGD 1004	Videography	3
MGD 1011	Adobe Photoshop I	3
MGD 1014	Typography I	3
MGD 1063	Sound Design I	3
MGD 1064	Digital Video Editing I	3
MGD 1065	After Effects I	3
MGD 2004	Videography II	3
MGD 2044	Integrated Multimedia Dev	3
MGD 2064	Digital Video Editing II	3
MGD 2068	Business for Creatives	3
MGD 2089	Capstone	3

Subtotal: 42

General Education Courses

HUM 1003	Intro to Film Art: AH2	3
ART 1401	Digital Photography I	3
ENG 1031	Technical Writing I: CO1	3
MAT 1140	Career Math or higher	3
MAT 1240	MAT 1240 Math for Liberal Arts recommended	4
PSY 2221	Social Psychology: SS3	3

Subtotal: 15

Electives

Choose 3 credits from the following:

MGD 1012	Adobe Illustrator I	3
MGD 2063	Sound Design II	3
MGD 2065	After Effects II	3
MGD 2080	Internship	3

Subtotal: 3

TOTAL CREDIT HOURS: 60

Physician Assistant Studies

www.rccc.edu/physician-assistant

Degree: Master of Physician Assistant Studies

Physician Assistants (PAs) are healthcare providers who are authorized to practice medicine with the supervision of a licensed physician. The mission of the RRCC PA Program is to prepare physician assistants to practice and promote empathic, primary-care focused medicine that serves the community.

The Physician Assistant Master’s degree program is a rigorous, year-round, 27-month curriculum. Students progress through the full-time prescribed curriculum as a cohort. Completion of the program qualifies graduates to sit for the Physician Assistant National Certifying Examination (PANCE). Approximately 13 months of the program is on-campus didactic curriculum involving classroom, laboratory, and small-group work. The remainder of the program is devoted to off-campus clinical rotations and completing the Master’s capstone project. The program’s clinical rotations are throughout Colorado and Wyoming, many in rural and underserved areas.

Please note that admissions requirements, program curriculum, and graduation requirements are subject to change. The RRCC PA program website is the most current source for program information.

Program Application and Admission Criteria

Candidates must submit an application to the program through the Central Application Service for Physician Assistants (CASPA). Admissions Requirements and Application Procedures: www.rccc.edu/physician-assistant/admission. At the time of application, candidates must have completed a bachelor’s degree from a regionally accredited institution of higher education, the required prerequisites, and 2000 hours of paid, health care-relevant experience.

Accreditation

The Red Rocks Community College Physician Assistant Program is accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). The RRCC Program offers courses leading to a Certificate in PA Studies and prepares the student for the Physician Assistant National Certifying Exam (PANCE) which is administered by the National Commission for the Certification of Physician Assistants (NCCPA). Upon passage of the PANCE, graduates are eligible for licensure in any state.

Physician Assistant Studies Master's Degree requirements (p. 133)

Physician Assistant Studies Master's Degree

Degree Requirements

Required Courses

Fall Semester

PAS 6001	Professional Seminar I	1
PAS 6050	History and Physical Exam I	4
PAS 6006	Science Foundations	1
PAS 6047	Physiology/Pathophysiology I	6
PAS 6009	Human Anatomy I	2
PAS 6010	Human Anatomy Lab I	1
PAS 6030	Pharmacology I	2
PAS 6040	Clinical Medicine I	13
PAS 6041	Clinical Medicine Lab I	2

Subtotal: 32

Spring Semester

PAS 6002	Professional Seminar II	1
PAS 6011	Human Anatomy II	2
PAS 6012	Human Anatomy Lab II	1
PAS 6018	Psychosocial Care	3
PAS 6021	Physiology/Pathophysiology II	4
PAS 6031	Pharmacology II	4
PAS 6042	Clinical Medicine II	13
PAS 6043	Clinical Medicine Lab II	2
PAS 6051	History and Physical Exam II	4

Subtotal: 36

Summer Semester (8-week block)

PAS 6032	Pharmacology III	2
PAS 6060	Evidence - Based Medicine	2
PAS 6100	Competencies for Clinical Practice	3
PAS 6105	Clinical Decision Making I	2

Subtotal: 7

2nd Fall Semester (6 weeks)

PAS 6053	Advanced Practice Seminar	2
PAS 6034	Clinical Pharmacotherapeutics	2
PAS 6106	Clinical Decision Making II	2
		Subtotal: 6

Required

PAS 6700	Patient Care I	6
PAS 6701	Patient Care II	3
PAS 6702	Patient Care III	12
PAS 6703	Patient Care IV	9
PAS 6704	Patient Care V	6
PAS 6889	Master's Project/Capstone	3
		Subtotal: 39

TOTAL CREDIT HOURS: 120

Physics

www.rccc.edu/physics

Degree: Associate of Science

Physics AS Degree With Designation (p. 68)

Physics AS Degree With Designation

For those planning to transfer to a four-year college or university to complete a major in Physics. Consult with a faculty advisor before beginning this area of study. These courses provide the basic preparation leading to physics-related careers. Some courses might not be offered each semester.

Physics AS Designated Degree Requirements (p. 68)

Plumbing

www.rccc.edu/plumbing

This program provides basic entry-level and job upgrade skills. This certificate was created in partnership with industry associates and The Department of Labor. It addresses the need of most contractors for multi-talented employees that can handle varied tasks with confidence. It is also intended to assist in the preparation of plumbers for successful completion of state plumbing exams. Completion of plumbing-related coursework at Red Rocks Community College can replace the field experience (work under a master plumber) required to qualify to take the exams as follows: one hour of classroom training equals one hour of on-the-job training up to a maximum of one year.

Specialized and job upgrade courses (for example, PLU 2007 International Plumbing Code, PLU 2047 Hot-Water Heating Systems) will continue to be taught as stand-alone courses.

Please see Air Conditioning, Heating, and Refrigeration (p. 82); or Carpentry (p. 90) for additional degrees and certificates under this category.

Students should call 303-914-6306 for advising.

Certificate

Plumbing Service (p. 134)

Plumbing Service Certificate

Certificate Requirements

Required Courses

PLU 1001	Piping Skills	4
PLU 1004	Plumbing Service	4
PLU 1008	Soldering & Brazing Skill	0.5
PLU 2007	International Plumbing Code	4
HWE 1001	Community First Aid and CPR	1
EIC 1103	Electrical Safety Requirements	1
HVA 1005	Electricity for HVAC/R	4
	or	
PLU 1005	Basic Electricity	4

TOTAL CREDIT HOURS: 18.5

Political Science

www.rccc.edu/political-science

Degree: Associate of Arts

Political Science AA Degree With Designation (p. 69)

Political Science AA Degree With Designation

If you plan to transfer to a four-year college or university to complete a major in Political Science, you should complete the following courses. Consult with a faculty or academic advisor before beginning this program of study. These courses provide the basic preparation leading to political science-related careers.

Power Equipment and Powersports Vehicle Technology

www.rccc.edu/warrentech/power-equipment-sport-vehicle-technology

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRC students pursuing certain career and technical college degrees/certificates may take courses (on a space-available basis) at Warren Tech (WT), which is adjacent to the RRC campus. You must have graduated from high school, received a GED, or attained the age of 21. You pay RRC tuition and WT program fees and your coursework is recorded on your RRC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start, and end dates differ from those of RRC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m. For more information, see **Warren Tech Students** (p. 16) under Student Types.

This two-year program is designed to provide you with the basic and advanced skill training as needed for successful entry to the power and sport vehicle industry.

Certificates

Power Equipment Maintenance Technician (p. 134)

Power Sports Vehicle Maintenance Technician (p. 135)

Degree: Associate of Applied Science

Power Equipment and Sports Vehicle Technology (p. 135)

Power Equipment and Powersports Vehicle Technology Certificates

Power Equipment Maintenance Technician Certificate

Certificate Requirements

Required Courses

PVT 1000	Intro to Power Vehicle Safety	2
PVT 1005	PV Preventative Maintenance	2
PVT 1010	PV Electrical Systems	4
PVT 1020	PV Engine Repair	4
PVT 1030	PV Hydraulics	4
PVT 1040	PV Fuel and Emissions	4
PVT 1050	PV Diesel Engines	4

TOTAL CREDIT HOURS: 24

Powersports Vehicle Maintenance Technician Certificate

Certificate Requirements

Required Courses

PVT 2010	PV Advanced Electrical Systems	4
PVT 2020	PV Advanced Engine Repair	4
PVT 2030	PV Drive Systems	4
PVT 2035	PV Brakes and Suspension	4
PVT 2040	PV Advanced Fuel & Emissions	4
PVT 2050	PV General Service	4

TOTAL CREDIT HOURS: 24

Power Equipment and Powersports Vehicle Technology Degree

Power Equipment and Powersports Vehicle Technology AAS Degree

Certificate Requirements

Required Courses

PVT 1000	Intro to Power Vehicle Safety	2
PVT 1005	PV Preventative Maintenance	2
PVT 1010	PV Electrical Systems	4
PVT 1020	PV Engine Repair	4
PVT 1030	PV Hydraulics	4
PVT 1040	PV Fuel and Emissions	4
PVT 1050	PV Diesel Engines	4
PVT 2010	PV Advanced Electrical Systems	4
PVT 2020	PV Advanced Engine Repair	4
PVT 2030	PV Drive Systems	4
PVT 2035	PV Brakes and Suspension	4
PVT 2040	PV Advanced Fuel & Emissions	4
PVT 2050	PV General Service	4

General Education Courses

See AAS Degree Requirements (p. 55)

TOTAL CREDIT HOURS: 63

Precision Machining Technology

www.rrcc.edu/warrentech/precision-machining-technology

Through a cooperative agreement with Warren Tech (WT), the career and technical high school for Jefferson County Public Schools, RRCC students pursuing select career and technical college degrees and certificates attend Warren Tech for specific coursework and receive RRCC credit. RRCC students can attend WT on a space-available basis, provided they have either graduated from high school, received a GED, or attained the age of 21. **For more information, see Warren Tech Students** (p. 16), under Student Types in the Admissions and Enrollment Section of the catalog.

This program is designed to develop the skills necessary for entry-level employment in the machining industry. Entry-level skills in fabrication and plastic parts that meet industrial standards will be taught. The Precision Machining program is currently undergoing revision to offer a wider variety of courses and times. Please refer to the website for the most recent program information.

Introductory Certificates

Machine Shop Fundamentals (p. 135)

Metrology Quality Control (p. 135)

Advanced Certificates

CNC Lathe Machine Operator (p. 135)

Manual Machine Operator (p. 135)

CNC Mill Operator (p. 136)

5 Axis Milling (p. 136)

Wire EDM Operator (p. 136)

Swiss Screw Machine (p. 136)

Degree: Associate of Applied Science

Precision Machining (p. 136)

Precision Machining Introductory Certificates

Machine Shop Fundamentals Certificate

Certificate Requirements

Required Courses

MAC 1010	Introduction to Engine Lathe	3
MAC 1020	Intro to Milling Machine	3

TOTAL CREDIT HOURS: 6

Metrology Quality Control Certificate

Certificate Requirements

Required Courses

MAC 2050	Advanced Inspection Techniques	3
MAC 2066	Adv Inspection Techniques II	3
MAC 2067	Metrology Maintenance	3
EGT 2305	Geometric Dimension/Tolerance	3

TOTAL CREDIT HOURS: 12

Precision Machining Advanced Certificates

CNC Lathe Machine Operator Certificate

Certificate Requirements

Required Courses

MAC 2001	Intro to CNC Turning Operation	3
MAC 2002	CNC Turning Operations II	3
MAC 2045	CADCAM 3D	3

TOTAL CREDIT HOURS: 9

Manual Machine Operator Certificate

Certificate Requirements

Machine Shop Fundamentals Certificate (p. 135) (6 credits)

Required Courses

MAC 1011	Intermediate Engine Lathe	3
MAC 1021	Intermediate Milling Machine	3
MAC 2050	Advanced Inspection Techniques	3
EGT 2305	Geometric Dimension/Tolerance	3

TOTAL CREDIT HOURS: 18

MAT 1140 Career Math or higher 3

CNC Mill Operator Certificate

Certificate Requirements

Required Courses

MAC 2005	Intro to CNC Milling Operation	3
MAC 2006	CNC Milling Operations II	3
MAC 2045	CADCAM 3D	3

TOTAL CREDIT HOURS: 9

5 Axis Milling Certificate

Certificate Requirements

Required Courses

MAC 2060	5-Axis Mill Operation	3
MAC 2061	5-Axis Mill Programming	3

TOTAL CREDIT HOURS: 6

Wire EDM Operator Certificate

Certificate Requirements

Required Courses

MAC 2053	Wire EDM Operation	3
MAC 2057	Wire EDM Programming	3

TOTAL CREDIT HOURS: 6

Swiss Screw Machine Certificate

Certificate Requirements

Required Courses

MAC 2010	Intro to Swiss Turn Operations	3
MAC 2011	Swiss Turn Programming I	3

TOTAL CREDIT HOURS: 6

Precision Machining AAS Degree

Degree Requirements

Required Courses

EGT 2305	Geometric Dimension/Tolerance	3
MAC 2050	Advanced Inspection Techniques	3
MAC 1010	Introduction to Engine Lathe	3
MAC 1011	Intermediate Engine Lathe	3
MAC 1020	Intro to Milling Machine	3
MAC 1021	Intermediate Milling Machine	3
MAC 2005	Intro to CNC Milling Operation	3
MAC 2006	CNC Milling Operations II	3
MAC 2045	CADCAM 3D	3
MAC 2001	Intro to CNC Turning Operation	3
MAC 2002	CNC Turning Operations II	3

Subtotal: 33

Electives (12 credits)

Electives from the MAC prefix, with faculty advisor recommendations

Subtotal: 12

General Education Courses (15 credits)

ENG 1021	English Composition I: CO1 or higher	3
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Choose courses from at least two of the following areas (9 credits)

Arts and Humanities

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE (1000 and above)

Natural and Physical Sciences

AST, BIO, CHE, ENV, GEY, MET, PHY, SCI (1000 and above)

Social and Behavioral Sciences

ARG, ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC (1000 and above)

Subtotal: 15**TOTAL CREDIT HOURS: 60**

Psychology

www.rccc.edu/psychology

The field of psychology is concerned with the study of normal and abnormal human behavior. Psychologists frequently provide personal counseling in hospitals, clinics, schools, corrections facilities, or in their own private practices. Experimental psychologists work in laboratories and try to develop theories of why and how people behave as they do. Degree: Associate of Arts

Degree: Associate of Arts

Psychology AA Degree With Designation (p. 69)

Degree: Associate of Science

Psychology AS Degree With Designation (p. 70)

Psychology AA Degree With Designation

Completion of the following courses is appropriate for those who plan to transfer to a four-year college or university to complete a major in Psychology. Consult with a faculty advisor before beginning any program of study.

Psychology AA Designated Degree Requirements (p. 69)

Psychology AS Degree With Designation

Completion of the following courses is appropriate for those who plan to transfer to a four-year college or university to complete a major in Psychology. Consult with a faculty advisor before beginning any program of study.

Psychology AS Designated Degree Requirements (p. 70)

Public Health

Degree: Associate of Arts

Public Health AA Degree With Designation (p. 70)

Public Health AA Degree With Designation

Public Health AA Degree With Designation Requirements (p. 70)

Radiologic Technology

www.rccc.edu/radiologic-technology

The Associate of Applied Science (AAS) degree in Radiologic Technology prepares students for a career in x-ray imaging as a Radiologic Technologist. The program is full-time, starts in the Fall, and spans 21 month/5 semesters. Instruction occurs primarily at the Arvada campus, but also via online coursework and clinical internship at medical facilities. Clinical internship occurs throughout the program. Basic clinical training is completed before students enter clinical rotation. A capstone registry review course is required during the final semester prior to graduation. Graduates are eligible to sit for the ARRT certification exam in Radiography, RT(R).

Admission to the radiologic technology program is through a competitive selection process. The required general education and prerequisite courses must be complete or in-session when the student applies to the program. Applications are accepted once a year between January 1st–March 31st. Information sessions are held each semester. Additional fees apply for most RTE courses. Please contact an advisor or visit the website for details: www.rccc.edu/radiologic-technology.

As of January 1, 2023, RTE 1001, BIO 2101 & 2102 must be completed within seven years of the Fall start of the program and only HPR 1040 will be accepted for the Medical Terminology pre-requisite.

**Degree: Associate of Applied Science
Radiologic Technology (p. 137)**

Radiologic Technology AAS Degree

Degree Requirements

Prerequisite Courses

RTE 1001	Introduction to Radiography	2
HPR 1040	Comprehensive Medical Terminol	3
		Subtotal: 5

Required General Education Courses

ENG/COM	1000 or higher	3
MAT 1340	College Algebra: MA1	4
	or	
MAT 1420	College Trigonometry: MA1	3
	or	
MAT 1440	Pre-Calculus: MA1	5
	or	
MAT 2410	Calculus I: GT-MA1	5
	or higher	
BIO 2101	Human Anatomy & Phys I w/Lab: SC1	4
BIO 2102	Human Anatomy & Phys II w/Lab: SC1	4
PSY/SOC	1000 or higher	3
		Subtotal: 17

Required Courses

RTE 1011	Radiographic Patient Care	2
RTE 1021	Radiologic Procedures I	3
RTE 1022	Radiologic Procedures II	3
RTE 1031	Radiogr Pathology/Image Eval	1.5
RTE 1032	Radiog Pathology/Image Eval II	1.5
RTE 1041	Radiographic Equip/Imaging I	3
RTE 1042	Radiographic Equip/Imaging II	3
RTE 1081	Internship: Radiographic I	3
RTE 1082	Internship: Radiographic II	5
RTE 1083	Internship: Radiographic III	6
RTE 2021	Advanced Medical Imaging	3
RTE 2031	Radiation Biology/Protection	2
RTE 2081	Radiographic Internship IV	9
RTE 2082	Radiographic Clinical Intern V	9
RTE 2089	Capstone	3
		Subtotal: 57

TOTAL CREDIT HOURS: 79

**As of January 1, 2023, RTE 1001, BIO 2101 & 2102 must be completed within seven years of the Fall start of the program and only HPR 1040 will be accepted for the Medical Terminology pre-requisite.*

Real Estate

See Business (p. 87)

Secondary Education

See Teacher Education (p. 139)

Social Work

www.rccc.edu/social-work

Social workers help individuals, families, and groups increase their capacity for social functioning, and work to create conditions that support communities in need. The practice of social work requires knowledge of human development and behavior, of social, economic and cultural institutions, and of the interaction of all these factors. Social workers help a diverse population address their own needs through psychosocial services and advocacy. They also help people overcome some of life’s most difficult challenges: poverty, discrimination, abuse, addiction, physical illness, divorce, loss, unemployment, educational problems, disability, and mental illness. They help prevent crises and counsel individuals, families, and communities to cope more effectively with the stresses of everyday life.

Transfer Agreement with Metro State University

Social workers are highly trained and experienced professionals. Only those who have earned social work degrees at the bachelor’s, master’s, or doctoral levels—and completed a minimum number of hours in supervised fieldwork—are professional social workers. RRCC has a transfer agreement for students to complete their Associate of Arts degree with an emphasis in Social Work at RRCC and finish their Bachelor’s of Social Work at Metro State University in downtown Denver.

Social Work AA Degree (p. 137)

Social Work AA Degree

Degree Requirements

Articulation Agreement with Metro State College of Denver.

Required Courses

SWK 1000	Introduction to Social Work	3
PSY 1001	General Psychology I: SS3	3
PSY 1002	General Psychology II : SS3	3
		Subtotal: 9

Courses that fulfill General Education Requirements:

Communication

ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
COM 1150	Public Speaking	3
		Subtotal: 9

Mathematics

MAT 1260	Intro to Statistics: MA1	3
		Subtotal: 3

Arts and Humanities

Two gtPathways Arts & Humanities courses from two GT categories (GT-AH1, GT-AH2, GT-AH3).

Subtotal: 6

History

One gtPathways History course (GT-H11.)

Subtotal: 3

Social and Behavioral Sciences

POS 1011	American Government: SS1 AND either:	3
ANT 1001	Cultural Anthropology: SS3 or	3
SOC 1001	Intro to Sociology I: SS3	3
		Subtotal: 6

Natural and Physical Sciences

BIO 1005	Science of Biology w/Lab: SC1 or	4
BIO 1111	Gen College Biology I/Lab: SC1	5
		Subtotal: 7-10

Plus one additional *gt*Pathways Natural & Physical Sciences course (*GT-SC1, GT-SC2*).

See *GT Courses* (p. 76)

Electives

See approved AA Electives (p. 47) in AA Degree Requirements.

Subtotal: 5-8

Global Diversity - Metropolitan State University of Denver requirement.**Choose one course from the following:**

ART 1111	Art Hist Ancient/ Mediev: AH1	3
ART 1112	Art Hist Renaiss/1900: AH1	3
GEO 1005	World Regional Geography: SS2	3
HIS 1310	Western Civ:Antiquity-1650: HI1	3
HIS 1320	Western Civ: 1650-Present: HI1	3
HIS 1110	The World: Antiquity-1500: HI1	3
HIS 1120	The World: 1500-Present: HI1	3
HIS 2610	Hist of Modern China: GT-HI1	3
HIS 2200	History of Latin America: HI1	3
HIS 2500	History-Islamic Civilization: GT-HI1	3
HIS 2300	The Middle Ages: HI1	3
POS 2005	International Relations: SS1	3
		Subtotal: 3

Multicultural - Metropolitan State University of Denver requirement.**Choose one course from the following:**

ANT 2115	Native Peoples N. America: SS3	3
ETH 2000	Intro to Ethnic Studies: SS3	3
ETH 2012	African-American Studies	3
ETH 2024	Intro to Chicano Studies	3
HIS 2115	American Indian History: HI1	3
HIS 2110	African American History: HI1	3
LIT 2005	Race, Ethnicity, Culture: AH2	3
MUS 1025	History of Jazz: AH1	3
SOC 2018	Sociology of Diversity: SS3	3
		Subtotal: 3

Recommended Elective:

SWK 1200	Intervention Techniques	3
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TOTAL CREDIT HOURS: 60

Sociology

www.rccc.edu/sociology

The field of sociology is the systematic and scientific study of the cultural, institutional, and interactional forces that drive social change, give rise to social institutions, and shape the everyday lives and realities of individuals. The completion of the following courses is appropriate for those who plan to transfer to a four-year college or university to complete a major in Sociology. Consult with a faculty advisor before beginning any program of study.

Degree: Associate of Arts

Sociology AA Degree With Designation (p. 71)

Sociology AA Degree With Designation

Sociology AA Designated Degree Requirements (p. 71)

Sonography

www.rccc.edu/sonography

The sonography program prepares the student for entry-level positions in the field of diagnostic medical sonography.

Certificate

Echocardiography (p. 138)

Degree: Associate of Applied Science

Diagnostic Medical Sonography (p. 138)

Echocardiography Certificate

Certificate Requirements

Completion of a DMS Program & Sonography license is required for this certificate. Please visit our website for additional information and to fill out an application.

Required Courses

DMS 2501	Normal AdultEcho	3
DMS 2502	Adult Echo Pathology	3
DMS 2511	Adult Echo Scan Lab	3

TOTAL CREDIT HOURS: 9

Diagnostic Medical Sonography AAS Degree

This program is full time, starts in the Fall, and is a total of 21months/5 semesters. The first 2 semesters; courses are held at the Arvada Campus. Full time clinical internship is off campus and begins in the 3rd summer semester and continues full time into the Fall and Spring semesters.

Upon completion of the degree, students will be able to take national certification examinations from the American Registry of Diagnostic Medical Sonographers (ARDMS), in the following areas:

- Ultrasound Physics (SPI)
- Abdomen (AB)
- Obstetrics/Gynecology (OB/GYN)
- Registered Vascular Technology (RVT)

A qualifying degree is required for entry into the program; A two-year allied health degree that is patient care related or a four-year bachelor's degree in any major. A 2yr allied health degree is defined as 60 full semester credits or 84 quarterly credits with an externship/internship that translates as a credit hr on your transcripts. In addition to a qualifying degree, there are required general education courses and prerequisites. The required general education and prerequisite courses must be complete or in-session when the student applies to the program.

Admission to the sonography program is through a competitive selection process. Applications are accepted once a year from January to the end of March for the fall semester start of the same year. Information sessions are held regularly throughout the year. Please contact an advisor or visit the website for details and the most up to date information: www.rccc.edu/sonography.

Upon acceptance into the program, students can expect to spend 36-40 hours per week in the classroom or at clinical internship. Internships take place in healthcare facilities. Students can expect to rotate through a variety of clinical shifts, including days, nights, weekends, and overnights. Additional fees apply for some DMS courses.

Degree Requirements

Prerequisite Courses

DMS 1001	Introduction to Sonography	2
HPR 1040	Comprehensive Medical Terminol or equivalent 1+ credit	3
RTE 2055	Multiplanar Sectional Imaging	2
		Subtotal: 7

Prerequisite General Education Courses

ENG 1021	English Composition I: CO1 or COM (1000 or higher)	3
MAT 1340	College Algebra: MA1 (or higher MAT course 3-4 credits)	4
BIO 2101	Human Anatomy & Phys I w/Lab: SC1	4
BIO 2102	Human Anatomy & Phys II w/Lab: SC1	4
PSY/SOC	1000 or higher	3
		Subtotal: 17

Required Courses

DMS 2403	Cerebrovascular Sonography	2
DMS 2100	Small Parts Ultrasound	2
DMS 2201	OB/GYN Ultrasound I	2
DMS 2202	OB/GYN Ultrasound II	2
DMS 2101	Abdominal Ultrasound I	2
DMS 2102	Abdominal Ultrasound II	2
DMS 2001	Ultrasound Physics I	2
DMS 2002	Ultrasound Physics II	2
DMS 2111	General Ultrasound Scan Lab	3
DMS 2411	Vascular Ultrasound Scan Lab	3
DMS 2401	Abdominal Vascular Sonography	2
DMS 2071	Clinical I	6
DMS 2072	Clinical II	6
DMS 2073	Clinical III	6
DMS 2074	Clinical IV	6
DMS 2070	Clinical Observation	3
DMS 2402	Vascular Extremities	2
DMS 2088	Practicum	6
		Subtotal: 59

TOTAL CREDIT HOURS: 59

Speech and Communication

See Communication (p. 90)

Teacher Education

www.rccc.edu/elementary-secondary-teacher-education

Contact the teacher education faculty advisor before beginning any of these programs of study.

Degrees: Associate of Arts

- Elementary Teacher Education (K-6 grade) AA Degree With Designation (p. 61)
- Secondary Education (7-12 grade) (p. 139)

Secondary & Postsecondary Career and Technical Education (CTE) courses

Career and Technical Education EDU courses (p. 139)

Teacher Education Degrees

Elementary Teacher Education AA Degree With Designation

The AA degree requirements comply with the state wide Elementary Teacher Education Articulation Agreement between RRCC and Colorado's public four-year colleges and universities. If you plan to transfer to a four-year college or university within Colorado to complete teacher certification, you must complete the 41 credits outlined below with a C or higher, unless noted. The remaining 19 credits needed for the AA degree are specific to individual transfer schools.

Before beginning to take classes, you must meet with RRCC's Teacher Education faculty advisor to plan a course of study and to examine the list of approved credits for each four-year institution in Colorado.

See Elementary Teacher Education AA Designated Degree Requirements (p. 62)

Secondary Education AA Degree

If you plan to transfer to a four-year college or university to complete a Secondary Education teaching licensure program, meet with the RRCC Teacher Education faculty advisor to design a course of study.

Your associate's degree will focus on a specific content area (English, history, math, sciences, etc.) with electives including EDU 2211 Intro to Education and EDU 2088 Practicum.

Teacher Education Additional Program of Study

Secondary & Postsecondary Career and Technical Education (CTE) courses (p. 139)

Career and Technical Education EDU Courses

Requirements

These EDU courses meet requirements for secondary and postsecondary career and technical education (CTE) instructor renewal credentialing requirements for professional licensure. Secondary instructors visit the CDE website for specific CTE licensure requirements www.cde.state.co.us/cdeprof/cte_generalinfo

Postsecondary CTE instructors, contact your institution's CTE credentialing program administrator.

Courses

EDU 2221	Effective Teaching	1
EDU 2501	CTE in Colorado	1
EDU 2601	Adult Learning and Teaching	3
EDU 2661	Adv College Teaching Methods	1
EDU 2088	Practicum II	1
EDU 2089	Capstone	1

Theatre Arts and Dance

www.rccc.edu/theatre-arts-dance

Consult with the Program Director of Theatre Arts and Dance before beginning any program of study.

Certificates

Choreography (p. 140)

Costume Basics (p. 140)
 Advanced Costuming (p. 140)
 Stagehand Basics (p. 140)
 Stagehand Applications (p. 140)
 Stage Makeup (p. 141)
 Musical Theatre Performance (p. 141)
 Writing for Stage and Screen (p. 141)

TOTAL CREDIT HOURS: 6

Degree: Associate of Applied Science
 Theatre Technology (p. 141)

Degree: Associate of Arts
 Theatre AA Degree With Designation (p. 141)

Theatre Arts Certificates

Choreography Certificate

Certificate Requirements

This course of study is designed to train you for entry-level positions as a choreographer. Related professions are dancer, choreographer, assistant choreographer. You should consult with the Program Director of Theatre Arts and Dance early in your college career to explore all of your educational options. You must earn a C or higher in all theatre courses to graduate.

Required Courses

DAN 1006	Hip Hop Dance II	1
DAN 1021	Jazz I	1
DAN 1025	Dance Appreciation: AH1	3
DAN 1025	Dance Appreciation: AH1	3
DAN 2011	Dance Composition & Improv I	3
DAN 2024	Dance for Musical Theatre I	3

Choose from any of the other DAN courses for a total of 2 credits

DAN 1005	Hip Hop Dance I	1
DAN 1043	Tap I	1

TOTAL CREDIT HOURS: 11

Costume Basics Certificate

Certificate Requirements

The Certificate in Costume Basics is appropriate for those who want to prepare for a career in costume. Upon completion of the courses, you will be prepared for entry-level employment in costume and fashion careers as stitchers, wardrobe assistants, and costume shop assistants. You should consult with the Program Director of Theatre Arts and Dance early in your college career to explore all of your educational options. You must earn a C or higher in all theatre courses to graduate.

This certificate is intended for a one-semester (fall) course of study.

Required Courses

THE 1005	Theatre Appreciation: AH1	3
THE 1004	Basic Costume/Apparel Const	3

Advanced Costuming Certificate

Certificate Requirements

The Advanced Costuming Certificate is appropriate for those who want to prepare for a career in costume design. Upon completion of the courses, you will be prepared for entry-level employment in costume and fashion careers as stitchers, wardrobe assistants, and costume shop assistants. You should consult with the Program Director of Theatre Arts and Dance early in your college career to explore all of your educational options. You must earn a C or higher in all theatre courses to graduate.

This certificate is intended for a two-semester course of study.

Required Courses

THE 1031	Theatre Production I	3
THE 2002	Intermed Costume Construction	3
THE 1008	Theatre Script Analysis: AH1	3
THE 1009	Basics of Pattern Drafting	3
THE 2022	Millinery & Costume Accessory	3
THE 2045	Bas Costume Design/Constructn	3

TOTAL CREDIT HOURS: 18

Stagehand Basics Certificate

Certificate Requirements

This course of study is designed to train you for entry-level positions as back-stage technicians, running crews, shop assistants, and set-building. Related professions are carpentry, cabinet-making, and careers requiring construction skills. You should consult with the Program Director of Theatre Arts and Dance early in your college career to explore all of your educational options. You must earn a C or higher in all theatre courses to graduate.

This certificate is intended for a one-semester (fall) course of study.

Required Courses

THE 1016	Technical Theatre	3
THE 1005	Theatre Appreciation: AH1	3
THE 1031	Theatre Production I	3

TOTAL CREDIT HOURS: 9

Stagehand Applications Certificate

Certificate Requirements

This course of study is designed to train you for entry-level positions as a back-stage technician, running crew, shop assistant, and set-builder. Related professions are carpentry, cabinet-making, and careers requiring construction skills. You should consult with the Program Director of Theatre Arts and Dance early in your college career to explore all of your educational options. You must earn a C or higher in all theatre courses to graduate.

This certificate is intended for a two-semester course of study.

Required Courses

THE 1008	Theatre Script Analysis: AH1	3
THE 1032	Theatre Production II	3
THE 2000	Paint/Draw/Rende/Model Techs	3

Choose 2 of the following:

THE 2021	Set Design for Film & Theatre	3
THE 2016	Theatre Lighting and Design	3
THE 2026	Theatre Sound Op and Dsgn I	3
THE 1052	Production Stage Management I	3

TOTAL CREDIT HOURS: 15

Stage Makeup Certificate

Certificate Requirements

This course of study is designed to train you for entry-level positions as makeup artists. Related professions are makeup assistant, makeup designer, special effects makeup designer. You should consult with the Program Director of Theatre Arts and Dance early in your college career to explore all of your educational options. You must earn a C or higher in all theatre courses to graduate.

This certificate is intended for a one-semester course of study, offered in the spring).

Required Courses

THE 1035	Stage Makeup I	3
THE 1036	Stage Makeup II	3

TOTAL CREDIT HOURS: 6

Musical Theatre Performance Certificate

Certificate Requirements

This course of study is designed to train you for entry-level positions as a musical theatre performer. Related professions are actor/singer, choreographer, director, dancer. You should consult with the Program Director of Theatre Arts and Dance early in your college career to explore all of your educational options. You must earn a C or higher in all theatre courses to graduate.

This certificate is intended for a one-year course of study, divided in to two semesters (fall and spring).

Required Courses

THE 1011	Acting I	3
THE 1088	Practicum	3
THE 1026	Auditioning-Musical Theater	3
THE 2010	Singing for Actors	3
DAN 2024	Dance for Musical Theatre I	3

TOTAL CREDIT HOURS: 15

Writing for Stage and Screen Certificate

Certificate Requirements

This course of study is designed to train you for entry-level positions as writers for stage and screen. Related professions are playwright, screenwriter, editor. You should consult with the Program Director of Theatre Arts and Dance early in your college career to explore all of your educational options. You must earn a C or higher in all theatre courses to graduate.

This certificate is intended for a one-year course of study, divided in to two semesters (fall and spring).

Required Courses

THE 1008	Theatre Script Analysis: AH1	3
THE 2015	Playwriting: AH1	3
FVT 2050	Scriptwriting for Film & Video	3
THE 2055	Advanced Playwriting	3
ENG 2021	Creative Writing I: AH1	3

TOTAL CREDIT HOURS: 15

Theatre Arts Degrees

Theatre Technology AAS Degree

Degree Requirements

This two-year course of study will prepare you for entry-level employment in technical support positions within the entertainment industry. In addition, it will provide the first two years of necessary course work if you want to pursue advanced degrees at four-year institutions in theatre design and technology. Consult with the Program Director of Theatre Arts and Dance early in your college career to explore all your educational options. You must earn a C or higher in all theatre courses to graduate.

Required Courses

THE 1004	Basic Costume/Apparel Const	3
THE 1005	Theatre Appreciation: AH1	3
THE 1008	Theatre Script Analysis: AH1	3
THE 1009	Basics of Pattern Drafting	3
THE 1016	Technical Theatre	3
THE 1029	Intro-Entertainment Industry	3
THE 1031	Theatre Production I	3
THE 1032	Theatre Production II	3
THE 2000	Paint/Draw/Rende/Model Techs	3
THE 2002	Intermed Costume Construction	3
THE 2031	Theatre Production III	3
THE 2080	Internship	1-6

Subtotal: 34-39

Choose Three from the following:

THE 1052	Production Stage Management I	3
THE 2016	Theatre Lighting and Design	3
THE 2021	Set Design for Film & Theatre	3
THE 2026	Theatre Sound Op and Dsgn I	3
THE 2022	Millinery & Costume Accessory	3

Subtotal: 9

General Education Courses

ENG 1021	English Composition I: CO1	3
MAT 1140	Career Math or higher	3

Subtotal: 6

Required Arts and Humanities Courses

THE 2011	Development of Theatre Greek-Renaissance: GT-AH1	3
THE 2012	Dev of Theatre Restor-Mod: AH1	3

Subtotal: 6

Natural and Physical Sciences

AST, BIO, CHE, ENV, GEY, PHY, SCI

Subtotal: 3

OR

Social and Behavioral Sciences

ANT, ECO, GEO, GIS, HIS, POS, PSY, SOC, WST, ETH

Subtotal: 3

TOTAL CREDIT HOURS: 60

Theatre AA Degree With Designation

The completion of the following courses is appropriate for those who plan to transfer to a four-year college or university to complete a major in Theatre. This program provides basic preparation leading to theatre-related careers, as well as to the teaching of theatre.

Theatre AA Designated Degree Requirements (p. 73)

Water Quality Management Technology

www.rccc.edu/water-quality-management

The Water Quality Management Technology (WQM) Program at Red Rocks Community College offers an Associates of Applied Science (AAS) and a Bachelor's of Applied Science (BAS) degree as well as several academic certificates. The AAS is a technical degree for students interested in a career in the water industry. The BAS degree provides students with a broader understanding of water quality issues upstream and downstream from treatment facilities. WQM graduates will be prepared to protect water resources for environmental and human health. Students are introduced to career opportunities within the water industry to establish an educational path that best fits their goals and interests.

Licensed treatment operators can obtain training units by completing coursework and/or obtaining certificates. WQM also pairs students with a variety of internship and capstone opportunities so they can further hone their area of expertise.

Information: 303-914-6120

Certificates

- Asset Management Professional (p. 142)
- Distribution and Collection Training (p. 142)
- Introduction to Water Treatment (p. 142)
- Introduction to Wastewater Treatment (p. 142)
- Laboratory Analysis (p. 142)
- Mathematics in Water Quality (p. 143)
- Integrated Water Professional (p. 142)
- Infrastructure Security Professional (p. 142)
- Water Technology Professional (p. 143)

Degree: Associate of Applied Science

Water Quality Management Technology (p. 143)

Degree: Bachelor's of Applied Science

Water Quality Management Technology (p. 143)

Water Quality Management Technology Certificates

Asset Management Professional Certificate

Certificate Requirements

Requirements List

WQM 1020	Water Quality Equip Maint I	4
WQM 1024	Water Certification Review for C & D	3
WQM 1025	Wastewater Certification Review for C&D	3
EIC 2340	SCADA	4
EIC 2322	Instrument & Process Control I	4

TOTAL CREDIT HOURS: 18

Distribution and Collection Training Certificate

Certificate Requirements

Required Courses

WQM 1009	Water Distribution	3
WQM 1018	Wastewater Collection Systems	3

TOTAL CREDIT HOURS: 6

Infrastructure Security Professional Certificate

Certificate Requirements

Requirements List

WQM 1024	Water Certification Review for C & D	3
WQM 1025	Wastewater Certification Review for C&D	3
WQM 1026	Safety & Security Systems	3
EIC 2340	SCADA	4
CNG 1001	Networking Fundamentals	3
CNG 1031	Prin of Information Assurance	3
CNG 1032	Network Security Fundamentals	3

TOTAL CREDIT HOURS: 22

Integrated Water Professional Certificate

Certificate Requirements

Requirements List

WQM 1000	Introduction to Water Quality	3
WQM 1019	Basic Water Quality Analyses	4
WQM 1023	Water Reuse System	3
WQM 1069	International Development	3
WQM 2000	Hydraulics-Water Quality Mgmt	4
WQM 2016	Bio/Bacteriological Water Qual	4

TOTAL CREDIT HOURS: 21

Introduction to Water Treatment Certificate

Certificate Requirements

Required Courses

WQM 1000	Introduction to Water Quality	3
WQM 1024	Water Certification Review for C & D	3

TOTAL CREDIT HOURS: 6

Introduction to Wastewater Treatment Certificate

Certificate Requirements

Required Courses

WQM 1000	Introduction to Water Quality	3
WQM 1025	Wastewater Certification Review for C&D	3

TOTAL CREDIT HOURS: 6

Laboratory Analysis Certificate

Certificate Requirements

Required Courses

WQM 1019	Basic Water Quality Analyses	4
WQM 2016	Bio/Bacteriological Water Qual	4
TOTAL CREDIT HOURS: 8		

Mathematics in Water Quality Certificate

Certificate Requirements

Required Courses

WQM 1005	Specific Calcs-Water Qual Mgmt	4
WQM 2000	Hydraulics-Water Quality Mgmt	4
TOTAL CREDIT HOURS: 8		

Water Technology Professional Certificate

Certificate Requirements

Requirements List

WQM 1000	Introduction to Water Quality	3
WQM 1024	Water Certification Review for C & D	3
WQM 1025	Wastewater Certification Review for C&D	3
WQM 1035	Water Utility Technician	4
EIC 2340	SCADA	4
TOTAL CREDIT HOURS: 17		

Water Quality Management Technology Degrees

Water Quality Management AAS Degree

The AAS is a technical degree for students interested in a career in the water industry. WQM graduates will be prepared to protect water resources for environmental and human health. Students are introduced to career opportunities within the water industry to establish an educational path that best fits their goals and interests. Satisfactory completion, grade of C or higher, is mandatory for all core WQM and certificate coursework.

Degree Requirements

Required Courses

WQM 1000	Introduction to Water Quality	3
WQM 1005	Specific Calcs-Water Qual Mgmt	4
WQM 1019	Basic Water Quality Analyses	4
WQM 1020	Water Quality Equip Maint I	4
WQM 1026	Safety & Security Systems	3
WQM 2000	Hydraulics-Water Quality Mgmt	4
WQM 2006	Design Interp-Water Qual Mgmt	4
WQM 2016	Bio/Bacteriological Water Qual	4
WQM 2017	Disinfect Tech-Water Qual Syst	4
Subtotal: 34		

General Education Courses

ENG 1021	English Composition I: CO1 or higher	3
MAT 1140	Career Math or higher	3
GIS 1001	Introduction to GIS	3

And 6 credits from any two of the following three areas:

Arts & Humanities (3 credits)

ARA, ART, ASL, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural & Physical Sciences (3 credits)

AST, BIO, CHE, ENV, GEY, MET, NRE, PHY, SCI

Social & Behavioral Sciences (3 credits)

AGR, ANT, ECO, GEO, HIS, POS, PSY, SOC

Subtotal: 15

Electives

Approved WQM Electives

BUS 1021 Basic Workplace Skills (1 credit)

And

12 credits of any general education prefix or WQM courses not required for the degree or EIC 2325, EIC 2330 or EIC 2340, or EGT 1110, or CAD 1101

Subtotal: 13

TOTAL CREDIT HOURS: 62

Water Quality Management BAS Degree

The BAS degree provides students with a broader understanding of water quality issues upstream and downstream from treatment facilities. WQM graduates will be prepared to protect water resources for environmental and human health. Students are introduced to career opportunities within the water industry to establish an educational path that best fits their goals and interests. Satisfactory completion, grade of C or higher, is mandatory for all core WQM coursework.

Degree Requirements

General Education Required Courses (37 Credits)

CHE 1111	Gen College Chem I/Lab: SC1	5
BIO 1005	Science of Biology w/Lab: SC1	4
MAT 1340	College Algebra: MA1	4
ENG 1021	English Composition I: CO1	3
ENG 1022	English Composition II: CO2	3
COM 1150	Public Speaking	3
Subtotal: 37		

Additional Requirements (15 credits)

Two Arts and Humanities GT courses (6 credits)
Two Social and Behavioral Science GT courses (6 credits)
One History GT course (3 credits)

Subtotal: 15

Lower Division Water Quality Management Courses (30 Credits)

WQM 1000	Introduction to Water Quality	3
WQM 1019	Basic Water Quality Analyses	4
WQM 1020	Water Quality Equip Maint I	4
WQM 1026	Safety & Security Systems	3
WQM 2000	Hydraulics-Water Quality Mgmt	4
WQM 2006	Design Interp-Water Qual Mgmt	4
WQM 2016	Bio/Bacteriological Water Qual	4
WQM 2017	Disinfect Tech-Water Qual Syst	4
Subtotal: 30		

Upper Division Water Quality Management Courses (30 credits)

WQM 3011	Survey of Envirn Water Acts or	2
WQM 3012	Survey Safe Drinking Water Act and	2
WQM 3027	Water Industry Management	3
WQM 3045	Principles of Hydrology	3
WQM 4021	Enviro Sampling & Containment	3
WQM 4027	Managing Water Projects	3

WQM 4028	Water Data Mgmt & Analysis	3
WQM 4060	Source Water Management	3
WQM 4055	Human/Water Eco Relationships	3
WQM 4065	Water Toxicity Impacts	4
WQM 4089	Senior Capstone	3
Subtotal:		30

TOTAL CREDIT HOURS: 9

College-Level Elective Courses (23 Credits)

These courses can be chosen by the student and may include AAS courses from WQM or college-level courses from other departments. Suggestions based on a student’s career path will be provided.

Subtotal: 23

TOTAL CREDIT HOURS: 120

Welding

www.rrcc.edu/warrentech/welding

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRCC students pursuing certain career and technical college degrees/certificates may take courses (on a space available basis) at Warren Tech (WT) which is adjacent to the RRCC campus. You must have graduated from high school, received a GED, or attained the age of 21. You pay RRCC tuition and WT program fees and your coursework is recorded on your RRCC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start and end dates differ from those of RRCC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m. For more information, see Warren Tech Students on page 12.

This program is designed to develop the skills necessary for entry-level employment in the welding industry. Entry-level welder certification from the American Welding Society may be earned upon completion of the program.

Certificates

- Flux Core Arc Welding (FCAW) (p. 144)
- Gas Metal Arc Welding (GMAW) (p. 144)
- Gas Tungsten Arc Welding (GTAW) (p. 144)
- Ox-Fuel Welding and Cutting (OFW and OFC) (p. 144)
- Shield Metal Arc Welding (SMAW) (p. 144)

Degree: Associate of Science
Welding (p. 144)

Welding Certificates

Ox-Fuel Welding and Cutting (OFW and OFC) Certificate

Certificate Requirements

Required Courses

WEL 1000	Safety for Welders	1
WEL 1001	Allied Cutting Processes	4
WEL 1002	Oxy-fuel Joining Processes	4

Shield Metal Arc Welding (SMAW) Certificate

Certificate Requirements

Required Courses

WEL 1003	Basic Shielded Metal Arc I	4
WEL 1010	Advanced Shielded Metal Arc I	4

TOTAL CREDIT HOURS: 8

Gas Metal Arc Welding (GMAW) Certificate

Certificate Requirements

Required Courses

WEL 2001	Gas Metal Arc Welding I	4
WEL 2002	Gas Metal Arc Welding II	4

TOTAL CREDIT HOURS: 8

Flux Core Arc Welding (FCAW) Certificate

Certificate Requirements

Required Courses

WEL 2003	Flux Cored Arc Welding I	4
WEL 2004	Flux Cored Arc Welding II	4

TOTAL CREDIT HOURS: 8

Gas Tungsten Arc Welding (GTAW) Certificate

Certificate Requirements

Required Courses

WEL 1024	Gas Tungsten Arc Welding I	4
WEL 2024	Gas Tungsten Arc Welding II	4

TOTAL CREDIT HOURS: 8

Welding AAS Degree

Through a cooperative agreement with Warren Tech (the career and technical high school for Jefferson County Public Schools), RRCC students pursuing certain career and technical college degrees/certificates may take courses (on a space available basis) at Warren Tech (WT) which is adjacent to the RRCC campus. You must have graduated from high school, received a GED, or attained the age of 21. You pay RRCC tuition and WT program fees and your coursework is recorded on your RRCC transcript.

Classes follow the WT/Jeffco Public Schools' calendar. Deadlines and class start and end dates differ from those of RRCC. WT classes are conducted on a block schedule. The morning classes run Monday–Friday from 7:30–10:30 a.m. and the afternoon classes run Monday–Thursday from 12:00–3:45 p.m. For more information, see Warren Tech Students on page 12.

This program is designed to develop the skills necessary for entry-level employment in the welding industry. Entry-level welder certification from the American Welding Society may be earned upon completion of the program.

Degree Requirements

Required Courses

WEL 1000	Safety for Welders	1
WEL 1001	Allied Cutting Processes	4
WEL 1002	Oxy-fuel Joining Processes	4
WEL 1003	Basic Shielded Metal Arc I	4
WEL 1010	Advanced Shielded Metal Arc I	4
WEL 1024	Gas Tungsten Arc Welding I	4
WEL 2001	Gas Metal Arc Welding I	4
WEL 2002	Gas Metal Arc Welding II	4
WEL 2003	Flux Cored Arc Welding I	4
WEL 2004	Flux Cored Arc Welding II	4
WEL 2024	Gas Tungsten Arc Welding II	4
WEL 2050	Layout and Fabrication	4
CAD 1101	Computer Aided Drafting/2D I	3
Subtotal: 48		

General Education Course Requirements:

ENG 1031	Technical Writing I: CO1	3
MAT 1140	Career Math	3
COM 1150	Public Speaking	3
PHY 1105	Conceptual Physics w/Lab: SC1	4
Subtotal: 13		

One elective from any of the following areas (3 credits):

Arts and Humanities

ARA, ART, COM, FRE, GER, HUM, ITA, JPN, LIT, MUS, PHI, RUS, SPA, THE

Natural and Physical Sciences

AST, BIO, CHE, GEY, PHY

Social and Behavioral Sciences

ANT, ECO, HIS, POS, PSY, SOC

Subtotal: 3

TOTAL CREDIT HOURS: 64

French/German/Spanish Language III:

FRE 2011	French Language III: AH4	3
GER 2011	German Language III : AH4	3
SPA 2011	Spanish Language III: AH4	3

French/German/Spanish Language IV:

FRE 2012	French Language IV: AH4	3
GER 2012	German Lang IV: GT-AH4	3
SPA 2012	Spanish Language IV: AH4	3

General Education Courses

See AA Degree Requirements (p. 46)

FRE 2011/GER 2011/SPA 2011 and FRE 2012/GER 2012/SPA 2012 fulfills General Education requirement

Subtotal: 32

Woodworking

See Fine Woodworking (p. 112)

World Languages

www.rccc.edu/world-languages

For those planning to transfer to a four-year college or university to complete a major in Foreign Languages. Consult with a faculty advisor before beginning this area of study.

These courses provide the basic preparation leading to professional advancement in careers such as business, computer technology, medicine, engineering, and in the natural and behavioral sciences.

Area of Study

World Languages Area of Study (p. 145)

World Languages Area of Study

Requirements

Suggested Courses for Transfer

Choose one (FRE, GER, SPA)

French/German/Spanish Language I:

FRE 1011	French Language I	5
GER 1011	German Language I	5
SPA 1011	Spanish Language I	5

French/German/Spanish Language II:

FRE 1012	French Language II	5
GER 1012	German Language II	5
SPA 1012	Spanish Language II	5

Course Descriptions

Course descriptions and course numbers are used by all Colorado Community Colleges to make it easier for students to select courses and transfer among state colleges.

AAA-Advancing Academic Achievement Courses

AAA 0099 - Active Learning Skills (1)

Allows students a variety of experiences in tutorial and enhanced learning activities in the reading, writing, math, and ESL. Topics include academic support, learning styles, and contextualized learning. Students will acquire reading, English composition, English as a Second Language and/or mathematics skills through the use of course tutorial software and individualized instruction.

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. Recommended for new and returning students, this course study areas including education and career planning, effective communication, personal management, critical and creative thinking, development of community and awareness of diversity, leadership, and techniques for successful academic performance.

AAA 1075 - Special Topics (0)

Exploration of current topics, issues and activities related to one or more aspects of the named discipline.

AAA 2075 - Special Topics (0)

Exploration of current topics, issues and activities related to one or more aspects of the named discipline.

ACC-Accounting Courses

ACC 1001 - Fundamentals of Accounting (3)

This course 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 1015 - Payroll Accounting (3)

Covers federal and state employment laws and their effects on personnel and payroll records. The course is non-technical and is intended to give students a practical working knowledge of the current payroll laws and actual experience in applying regulations, including computerized payroll procedures.

Prerequisite: ACC 121 or equivalent knowledge.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 0250 or equivalent placement scores.

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: Grade of C or higher in the following course: ACC 1021 or equivalent.

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: Grade of C or higher in the following course: 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.

Prerequisite: Grade of C or higher in the following course: ACC 1021 is strongly recommended.

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.

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.

Prerequisite: Grade of C or higher in the following course: ACC 121.

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.

Prerequisite: Grade of C or higher in the following course: ACC 1021 or equivalent knowledge.

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. Focus is 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: Grade of C or higher in the following course: ACC 1022.

ACC 2012 - Intermediate Accounting II (4)

Focuses on the theoretical and practical aspects of accounting for long-term liabilities, stockholders' equity, investments, pensions and leases. Includes income tax allocation, financial statement analysis, cash flow statements and accounting methods changes.

Prerequisite: Grade of C or higher in the following course: ACC 2011.

ACC 2016 - Govt & Not-for-profit Acct (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: Grade of C or higher in the following course: ACC 1022.

ACC 2026 - Cost Accounting (3)

Course covers cost accumulation methods and reports including job order, process, standards, and activity-based cost systems associated with budgeting, planning, and control of costs.

Prerequisite: Grade of C or higher in the following course: ACC 1022.

ACC 2045 - Computerized Acct Prof Pkg (3)

Integrates accounting principles and practices with a computerized accounting package such as Peachtree, DacEasy, or other professional package. Emphasizes computerized functions of the general ledger and integrated accounts payable, accounts receivable, invoicing and payroll systems.

Prerequisite: Grade of C or higher in the following courses: ACC 1001 or ACC 1021.

ACC 2080 - Internship (1-3)

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: Permission of instructor.

ACT-Auto Collision Technology Courses

ACT 1001 - Intro to Auto Collision Tech (4)

Designed as an orientation to the automotive collision repair industry. Students receive an overview of job possibilities as well as learn various types of automobile construction. Names, uses and maintenance procedures for a variety of tools and equipment are covered. Focuses on general collision repair and refinishing shop safety procedures with an emphasis on personal and environmental safety issues. Students also learn the proper handling and disposal of hazardous materials.

ACT 1010 - Safety in Collision Repair (2)

Introduces the student to safety techniques and operation as it relates to shop safety and industry standards. The student is exposed to regulations and collision shop operations. In addition, the student becomes involved with VICA, developing writing and speaking skills.

ACT 1011 - Metal Welding and Cutting I (3)

Covers sheet metal oxygen-acetylene welding and MIG welding techniques including safety, materials, equipment and setups. Personal and vehicle protective measures prior to welding procedures is presented.

ACT 1021 - Non-Structural Repair Prep (3)

Covers the basic characteristics of preparation for automotive repair. Students familiarize themselves with damage analysis, extent of damage and the sequence of repair. Focuses on removal of vehicle components and protection of panels along with storage and labeling of parts. Safety procedures and equipment use are included.

ACT 1022 - Panel Repair and Replacements (3)

Covers straightening techniques including tension pulls/stress relief, metal finishing, metal shrinking and use of fillers. Emphasizes the identification, handling and replacement of parts such as adjustment and alignment of bolt-on parts, fixed parts and accessories. Training covers the use of adhesives, sound deadeners and welding methods performed during repairs.

ACT 1023 - Metal Finishing & Body Filling (3)

Develops skills in metal finishing, metal shrinking, and the use of cosmetic fillers. Emphasis is placed on the use of proper tools required to perform these tasks, including use, selection and safety procedures for tools and equipment selected. Paint less Dent Repair Tools will also be introduced in this course along with beginning level repair techniques.

ACT 1024 - Replace Weld-on Exterior Panel (3)

Covers the replacement of welded-on exterior panels such as quarters, roofs, cab panels, side panels, etc. Emphasis is placed on the use of proper tools required to perform these tasks, including use, selection, and safety procedures for tools and equipment selected.

ACT 1031 - Structural Damage Diagnosis (3)

Focuses on methods of frame measurement using dimension charts and service manuals. Includes the use of self-centering gauges and mechanical and electronic measuring. Appropriate terms and definitions of vehicle structures and vehicle diagnosis is covered including identification and analysis of damage. Includes the techniques for basic hook ups and safety procedures used in making corrective pulls.

ACT 1032 - Structural Damage Repair (3)

Continues the study and application of frame measurement and repair. The student applies methods found in dimension charts and service manuals for vehicle diagnosis and straightening. Training includes the replacement of a structural panel with the identification of damaged suspension components replaced according to manufacturer's recommendations.

ACT 1041 - Refinishing Safety (1)

Covers correct use of safety procedures used in refinishing. Proper fit and use of various types of protective equipment is emphasized. The identification of tools and equipment, with use and maintenance is covered including national guidelines for proper disposal and handling of hazardous materials.

ACT 1042 - Surface Preparation I (2)

Performs surface preparation for refinishing including cleaning, sanding, feather edging, chemical treatment of bare materials and priming. The application of primers includes rationale and use of colored primers and sealers. In addition, the course will cover spot-priming for repaired areas.

ACT 1043 - Spray Equipment Operation (2)

Covers the inspection, cleaning and determination of the condition of spray guns and related equipment. Students learn skills for adjusting spray guns by setting-up and testing spray gun operations.

ACT 1044 - Refinishing I (2)

Provides the knowledge needed for application and use of automotive paint systems. Course includes locating color codes, mixing formulas, matching and selections of materials. Proper paint gun use and adjustments is taught for the product being applied. In addition, the student practices correct masking and detailing techniques.

ACT 1051 - Plastics & Adhesives I (1)

Designed to teach the state-of-the-art repair for both rigid and flexible plastic components and choosing adhesives using the latest manufacturer's repair techniques.

ACT 1060 - Custom Painting (3)

This course provides instruction in basic custom paint application such as pearl paints, candy colors, metal flakes, etc.

ACT 1061 - Automotive Graphics & Designs (3)

This course provides instruction in the application of graphics and designs to an automotive finish. These designs include striping, flames, paint fades, and graphics, etc.

ACT 1062 - Auto Air Brushing & Murals (3)

This course provides instruction in the use of airbrush equipment to produce murals. Instruction in mural layout background, foreground, and fine detail will be provided.

ACT 1063 - Auto Special Effects/Refinish (3)

This course provides instruction in the different types of design effects that can be achieved through special techniques.

ACT 1065 - Automotive Body Customizing I (3)

Covers tool identification welding (mig and resistance), plasma cutting, metal finishing, metal shrinking and the use of cosmetic fillers. Emphasis is placed on the use of proper tools required to perform body customizing tasks, including use, selection and safety procedures for tools and equipment selected.

ACT 1066 - Automotive Body Customizing II (3)

Covers modification of vehicle and vehicle parts such as Chopping, measuring, realigning, fabricating, recessing, shaping etc.

ACT 1067 - Automotive Body CustomizingIII (3)

Covers the completion of modifications that were started in Automotive Body Customizing II along with the addition of body molding kits.

ACT 1070 - Auto Collision Tech Lab Exp I (3)

Designed to prepare the student to perform basic tasks for a specialized area in a controlled instructional lab.

ACT 1071 - Auto Collision Tech Lab II (1-9)

Course is a continuation of Lab experience. Designed to prepare the individual to perform basic tasks for a specialized area in a controlled instructional lab.

ACT 1072 - Auto Collision Tech Lab III (3)

Course is a continuation of Lab experience. Designed to prepare the individual to perform basic tasks for a specialized area in a controlled instructional lab.

ACT 1075 - Special Topics (0)

Assists students who are interested in individual topics within the normal curriculum. The student identifies and selects objectives that they need for industry upgrades or special training to enter the workforce. The student may explore current topics, issues or activities related to one or more aspects of the Automotive Collision industry.

ACT 1080 - Auto Collision Repr Internsp I (1-9)

Designed to meet the needs of the student in selected specialized area in a work-based environment. Individualized instruction at the job site is coordinated based on student's interest and instructor approval.

ACT 1081 - Auto Collision Repr Intern II (1)

Course is a continuation of Level I Internship. Student uses the knowledge and skills acquired throughout the ACT program in a job site placement.

ACT 2005 - Estimating and Shop Management (3)

Initiates written estimates on damaged vehicles. Students learn shop management including work orders, ordering supplies, operating costs, timecards, shop liabilities, employee's safety and insurance management issues.

ACT 2011 - Metal Welding and Cutting II (2)

Covers mig welding procedures of seam weld, stitch welds and destructive testing. Resistance spot welding, which includes two-sided spot weld, plasma cutting, safety, materials, and equipment and operating procedures, with emphasis on shop safety are also presented.

ACT 2020 - Structural Repair II (4)

Designed as a continuation of ACR 219. Students continue practice in structural damage analysis and measuring procedures on both, unitized and body-over-frame type vehicles. Proper methods for straightening, as well as replacing structural, mechanical, and electronic components are covered.

ACT 2021 - Moveable Glass and Hardware (2)

Covers door glass, vent windows and glass mechanisms (both electric and mechanical) with emphasis on removal and replacement. In addition, interior trim panels, seats and headliners are removed and replaced. Student learns proper care and treatment of vehicle seat protectors plus the proper use of tools required to perform these tasks.

ACT 2026 - Production (4)

Simulates the actual working procedures of an auto collision repair technician. The student performs a variety of structural and non-structural repairs, as well as refinishing operations in accordance with industry procedures, and in compliance with estimates and flat-rate times from collision estimating guides. Students also develop leadership abilities and time management skills.

ACT 2031 - Adv Struct Damage Diag/Repair (3)

Covers major automotive body repair in vehicles with major damage on conventional structures and unibody structures. Student learns the operation of equipment and techniques used to straighten and align damaged frames. Identification and analysis of frames, hot and cold stress relieving, servicing and sectioning of structural frames is also included. Liability issues and the importance of making these corrections according to the manufacturer's recommendations and industry standards are emphasized.

ACT 2032 - Automotive Glass Repair (2)

Covers the removal and replacement of fixed glass using manufacturer's specifications, proper tools and recommended materials. Application of skills are demonstrated and utilized for the removal and replacement of modular glass using manufacturer's specifications and procedures.

ACT 2041 - Paint Defects (3)

Covers paint defects. Emphasizes the causes of paint defects with methods to cure problems during and after refinishing procedures. Students learn to identify the proper surface preparations to apply prior to refinishing. Training includes using paint equipment and determining paint film thickness with proper temperatures for refinishing.

ACT 2042 - Surface Preparation II (2)

Emphasizes surface preparation for refinishing including cleaning, sanding, feather edging, chemical treatment of bare metals and priming. The application of primers, including why and where to use them is covered.

ACT 2043 - Refinishing II (2)

In this advanced course students learn the necessary skills used to tint and blend panels working with the latest finishes and paints. Special coatings and procedures are covered in this course.

ACT 2044 - Final Detail (2)

Focuses on the detailing procedures in paint refinishing of vehicles. Methods and techniques are specialized to enhance painting skills. Transfers and tapes methods with decals etc. are demonstrated.

ACT 2051 - Plastics & Adhesives II (1)

Emphasizes advanced plastic and adhesives. The current state-of-the-art repair for both rigid and flexible plastic components using the latest manufacturer's repair techniques are presented. Sheet Molded Compound procedures and the use of proper adhesives is covered.

ACT 2065 - Street Rod I (2)

Introduces the student to the Street Rod industry to include safety practices, tools and equipment, automobile construction, the repair estimate, welding and cutting, characteristics and properties of sheet metal, damage analysis, sequence of repair, straightening techniques, metal finishing, and the use and application of body fillers.

ACT 2066 - Restraint Systems (1)

Students learn to inspect, remove and replace active restraint systems, passive restraint systems and supplemental restraint systems. Procedures are demonstrated for disarming and diagnosing restraint systems using electronic equipment and trouble codes. Instruction for passive restraint replacement is also covered in this course.

ACT 2067 - Street Rod II (6)

Continues Street Rod I to include safety practices, tools and equipment, automobile construction, the repair estimate, welding and cutting, characteristics and properties of sheet metal, damage analysis, sequence of repair, straightening techniques, metal finishing, and the use and application of body fillers.

ACT 2080 - Auto Coll Repr Internship III (0)

Individualized instruction at job site continues in this final internship. The student is encouraged to develop skills needed to enter employment in the automotive collision repair field.

ACT 2084 - Auto Coll Repr Internship IV (0)

Individualized instruction at job site continues in this final internship. The student is encouraged to develop skills needed to enter employment in the automotive collision repair field.

AEC-Arch Eng/Construction Mgmt Courses

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, multiview, oblique and isometric projections, and basic construction drawings.

Prerequisite: Grade of C or higher in the following course: CAD 1102 or permission of instructor.

AEC 1231 - Residential Construction Draw (4)

Investigates 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: Grade of C or higher in the following course: AEC 1210.

AEC 1520 - Construction Material/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 2085 - Independent Study (0)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

AEC 2210 - Architectural Design & Analysis (4)

Reviews conceptual design and architectural drafting techniques. The students will be introduced to site analysis through observation and sketching. Students will be required to present a design solution and evaluation of an assigned project through a combination of conceptual models, drawings, and sketches using various computer aided design programs.

Prerequisite: Grade of C or higher in the following course: AEC 1231, CAD 2220 or permission of instructor.

AEC 2230 - Architectural Design & Develop (4)

Reviews conceptual design, site analysis, and architectural drafting techniques. Students will be introduced to the development of design ideas and theories and learn how to present those ideas visually. Students will be required to analyze a site and produce a design solution that responds to that particular site through a combination of research data, conceptual models, drawings, and sketches. The student will produce a final presentation of all relevant data, sketches, conceptual models, and drawings using presentation boards produced in various graphical programs.

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.

AEC 2550 - Building Electrical/Mech Sys (3)

Acquaints the student with electrical and mechanical equipment and systems in buildings. Lectures cover the basic principles of electrical distribution, artificial lighting, fire protection, plumbing systems and heating, ventilating and air conditioning (HVAC) systems.

AGR-Agriculture Courses

AGR 2106 - World Population and Food: SS3 (3)

Covers the study of world population and food production and distribution. Problems and opportunities concerning population and food are discussed in a global context. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following course: CCR 0092 or CCR 0094 or equivalent placement score.

ANT-Anthropology Courses

ANT 1001 - Cultural Anthropology: SS3 (3)

Studies human cultural patterns and learned behavior including linguistics, social and political organization, religion, culture and personality, culture change, and applied anthropology. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following course: CCR 092 or CCR 094 or equivalent placement score.

ANT 1003 - Intro to Archaeology: 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 and the works of selected archaeologists, and discusses major archaeological theories. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following course: CCR 0092 or CCR 0094 or equivalent placement scores.

ANT 1005 - Bio Anthropology W/Lab: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 0250 or equivalent placement scores.

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 - Arch.of World Rock Art: 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. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following course: CCR 0092 or CCR 0094 or equivalent placement scores.

ANT 2085 - Independent Study (0)

Allows the student to independently study certain aspects of anthropology. It provides opportunity to investigate an area of interest that developed in introductory courses.

ANT 2115 - Native Peoples N. America: SS3 (3)

Studies the Indians of North America from the origins of native peoples in the New World, through the development of geographic culture areas, to European contact and subsequent contemporary Native American issues. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following course: CCR 0092 or CCR 0094 or equivalent placement scores. Offered: Usually offered in the Fall semester.

ANT 2125 - Anth of Religion: 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.

Prerequisite: Grade of C or higher in the following course: CCR 0092 or CCR 0094 or equivalent placement score.

ANT 2315 - Intro Forensic Anthrp w/Lab: SC1 (4)

Focuses on methods a Forensic Anthropologist uses in the medico-legal field. Upon successful completion, students will understand the anatomy of the human skeleton and how this specific knowledge is used to identify individuals, populations, as well as cause of death. This will be accomplished through readings, lectures, discussions, activities, labs, and film. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

ANT 2317 - Human Prehistory (3)

Survey current archaeological and paleoanthropological knowledge of human prehistory from the earliest hominins to the civilizations of the Old and New Worlds. Explore the interrelatedness of biological and cultural attributes in earlier hominin evolution. Examine phylogenetic controversies such as the multiregional vs. replacement models on later hominin evolution. Analyze competing hypotheses concerning the Neolithic and Urban revolutions.

ANT 2545 - Anthropology of Energy (3)

Examines issues of energy production and consumption that occupy a central role in national and global debates. Where does the majority of our energy currently come from, and where should it come from in the future? What is at stake in our energy lifestyles on both local and global scales?

ANT 2550 - Medical Anthropology: 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. This course is one of the Statewide Guaranteed Transfer courses. GT-SS3.

Prerequisite: Grade of C or higher in the following course: CCR 0902 or CCR 0094 or equivalent placement scores.

ARM-Army ROTC Courses

ARM 1011 - Adventures in Leadership I (2)

Introduces the student to fundamentals of leadership and the United States Army. Includes Army leadership doctrine, team-building concepts, time and stress management, 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.

ARM 2011 - Methods of Leadership & Mgmt 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 midlevel leaders in the cadet organization. Includes lecture and laboratory.

ARM 2012 - Methods of Leadership & Mgmt 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.

ART-Art Courses

Photography classes reside under both the ART and PHO prefixes and classes are held in the Multimedia Graphic Design department. All photography classes may include the artistic presentation of the nude human form.

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)

Focuses on learning to apply the elements and principles of design to three dimensional problems.

ART 1075 - Special Topics in Art (1-6)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

ART 1076 - Special Topics in Art (1-6)

Provides the student with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

ART 1077 - Special Topics in Art (1-6)

Provides the student with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

ART 1085 - Independent Study (3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: Permission of instructor.

ART 1110 - Art Appreciation: 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.

Prerequisite: Grade of C or higher in the following course: CCR 092 or CCR 094 or equivalent placement scores.

ART 1111 - Art Hist Ancient/ Medieval: AH1 (3)

Provides the knowledge base to understand the visual arts, especially as related to Western culture. Surveys the visual arts from the Ancient through the Medieval periods. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following course: CCR 0092 or CCR 0094 or equivalent placement scores.

ART 1112 - Art Hist Renaiss/1900: AH1 (3)

Provides the knowledge base to understand the visual arts, especially related to Western culture. Surveys the visual arts from the Renaissance to 1900.

Prerequisite: Grade of C or higher in the following course: CCR 0092 or CCR 0094 or equivalent placement scores.

ART 1113 - Art Hist 1900 to Present:AH1 (3)

Provides students with the knowledge base to understand the visual arts as related to Modern and Contemporary visual art. Surveys world art of the twentieth century, including Modernism to Post-Modernism. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or better in the following course: CCR 0092 or CCR 0094 or equivalent placement scores.

ART 1115 - History of Photography (3)

Surveys the history of photography from its beginnings to the present. Emphasizes individual photographers who have made significant contributions to the field. Includes technical, artistic, commercial and social development of photography as a form of visual communication.

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 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: Grade of C or better in the following course: ART 1201 or permission of instructor.

ART 1203 - Figure Drawing I (3)

Introduces the basic techniques of drawing the human figure.

ART 1205 - Drawing for the Graphic Novel (3)

Introduces the drawing and fine art principles used in developing illustrations for the graphic novel. Students explore the graphic novel as a vehicle for a unique, personal venue for artistic expression. Students explore the history of the graphic novel as well as examine different artistic styles used in the development of graphic novel illustrations. The application of artistic concepts in the creation of an individual graphic work and thorough examination of course material in terms of style, design considerations and visual elements are the primary focus. Students will create images for a graphic novel, focusing on unity of style and techniques for creating images appropriate to story line using black and white or grayscale illustrations.

Corequisite: ENG 2028.

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)

This course further explores techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development.

Prerequisite: Grade of C or higher in the following course: ART 1301 or permission of instructor.

ART 1306 - Pastel Painting (3)

Approaches the pastel medium in an inventive manner and introduces students to soft pastels and their many approaches to painting with them. Color theory will be taught in practice and application.

ART 1307 - Watercolor I (3)

Provides an introduction to the basic techniques and unique aspects of materials involved in the use of either transparent or opaque water media or both. Color theory is included.

ART 1308 - Watercolor II (3)

Continues the study of watercolor techniques, emphasizing original compositions and experimentation with materials. Color theory is included.

Prerequisite: Grade of C or better in the following course: ART 1308 or permission of instructor.

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.

Prerequisite: Basic computer skills are needed for success in this course. A digital camera with manual settings is required.

ART 1402 - Darkroom Photography I (3)

Introduces black and white film photography as a fine art medium and develops skills necessary for basic camera and 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.

ART 1405 - Mixed Media I: Digital Art (3)

Introduces students to the design and creation of fine-art composites that involve the combinations of techniques, texture, drawing, painting, photography, and objects, and emphasizes the computer as an art tool. In addition to incorporating technology-based vocabulary as it relates to fine-art technique, vector and raster applications are explored for the creation of montage and collage. No computer experience is necessary.

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: Grade of C or higher in the following course: ART 1601 or permission of instructor.

ART 1604 - Jewelry and Metalwork I (3)

Introduces the construction of jewelry designs in metals and small casting techniques.

ART 1605 - Jewelry and Metalwork II (3)

Emphasizes conceptual design development, using casting and specialized techniques.

Prerequisite: Grade of C or better in the following course: ART 1604 or permission of instructor.

ART 1703 - Ceramics I (3)

Introduces traditional and contemporary ceramic forms and processes including hand building and throwing on the potter's wheel.

ART 1704 - Ceramics II Wheel Throwing (3)

A continuation of ART 1703, this course emphasizes skill, technique and form.

Prerequisite: Grade of C or higher in the following course: ART 1703 or permission of instructor.

ART 2002 - Adv Visual Concepts 2-D Design (3)

Provides continued study of the principles and elements of two-dimensional design with an emphasis on visual communication for further application in fine art, commercial art, and/or applied arts.

ART 2003 - Adv Visual Concepts 3-D Design (3)

Provides continued study of the principles and elements of three-dimensional design with an emphasis on visual communication for further application in fine art, commercial art, and/or applied arts.

ART 2075 - Special Topics (1-6)

Provides the student with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

ART 2076 - Special Topics (1-6)

Provides the student with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

ART 2077 - Special Topics (1-6)

Provides the student with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

ART 2080 - Internship (1-6)

Provides the opportunity for students to gain supervised occupational experience in any of the disciplines involving the visual arts, including, but not limited to, gallery or museum administration and graphic design. Instruction is coordinated by the on-site supervisor and instructor and is totally based on the student's occupational experience plan. ~~~

Prerequisite: Permission of instructor.

ART 2085 - Independent Study (0)

Provides structured and guided, individualized research that is organized and tailored around the interests and needs of the individual student.

Prerequisite: Permission of instructor.

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.

Prerequisite: Grade of C or better in the following course: ART 1202 or permission of instructor.

ART 2202 - Drawing IV (3)

Explores advanced drawing problems with an emphasis on conceptual development and portfolio and/or exhibition quality presentation.

Prerequisite: Grade of C or better in the following course: ART 2201 or permission of instructor.

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.

Prerequisite: Grade of C or better in the following course: ART 1203.

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.

Prerequisite: Grade of C or higher in the following course: ART 1302 or permission of instructor.

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.

Prerequisite: Grade of C or higher in the following course: ART 2301 or permission of instructor.

ART 2305 - Mural Painting I (3)

This course introduces the student to the history, techniques, materials and concepts of mural painting with an emphasis on composition and content development.

ART 2306 - Mixed Media Painting (3)

Introduces the use of mixed media materials as alternative painting processes. This course explores new techniques, alternative painting materials, and concepts used in painting with mixed and alternative materials. Students will also work on composition and content development.

ART 2307 - Watercolor III (3)

Provides an introduction to the basic techniques and unique aspects of materials involved in the use of either transparent or opaque water media or both. Color theory is included.

Prerequisite: Grade of C or better in the following course: ART 2307 or permission of instructor.

ART 2308 - Watercolor IV (3)

Concentrates on the advanced study of techniques, individual style or expression, and consistency of compositional problem solving in watercolor.

Prerequisite: Grade of C or better in the following course: ART 2307 or permission of instructor.

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.

Prerequisite: Prerequisite: Grade of C or higher in the following courses: ART 1401.

ART 2402 - Darkroom Photography II (3)

This course is a further exploration in film camera and lab operations with an emphasis on individual creativity. It includes the development of a comprehensive portfolio.

Prerequisite: Grade of C or higher in the following courses: ART 1402.

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.

Prerequisite: Grade of C or better in the following course: ART 1401 or ART 1402.

ART 2406 - Figure Photography I (3)

Introduces students to the social, artistic and photographic aspects of fine art figure studies in photography, as the human figure is one of the most studied and practiced subjects in the field of creative visual expression. Students have the opportunity to photograph the figure using professional lighting equipment and professional models. Students are expected to push the limits of their artistic and creative abilities, as well as develop technical skills used in figure and other areas of fine art photography. Professional ethics, concerns, as well as group critiques are used throughout the course. Choice of camera, either digital or film, is left up to the student.

ART 2601 - Sculpture III (3)

Focuses on advanced individual sculpture projects, emphasizing experimentation with materials, accomplished technique and conceptual significance.

Prerequisite: Grade of C or higher in the following course: ART 1602 or permission of instructor.

ART 2603 - Jewelry and Metalwork III (3)

Focuses upon advanced work and emphasizes experimentation with materials and techniques, individual designs, and superior craftsmanship.

Prerequisite: Grade of C or better in the following course: ART 1605 or permission of instructor.

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: Grade of C or better in the following course: ART 2604 or permission of instructor.

ART 2703 - Ceramics III Molds and Casting (3)

Encourages students to develop an individual style of wheel thrown and hand built ceramic forms with continuing involvement in surface treatment.

Prerequisite: Grade of C or higher in the following course: ART 1704 or permission of instructor.

ART 2704 - Ceramics IV (3)

Continues advanced work with emphasis on various clay bodies, unique glazes and engobes, and combining different textures and shapes, and development of personal forms.

Prerequisite: Grade of C or higher in the following course: ART 2703 or permission of instructor.

ART 2906 - Marketing for Visual Arts (3)

Designed for advanced students interested in further exploring an art discipline to develop a more comprehensive portfolio.

ASE-Auto Service Technology

Courses

ASE 1001 - Auto Shop Orientation (2)

Provides students with safety instruction in the shop and on the Automobile. Emphasis is placed on the proper use and care of test equipment, precision measuring and machining equipment, gaskets, adhesives, tubing, wiring, jacks, presses, and cleaning equipment and techniques.

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 - Auto Brake Service I (2)

Covers basic operation of automotive braking systems. This includes operation, diagnosis and basic repair of disc, drum and basic hydraulic braking systems.

ASE 1011 - Auto Brake Service II (2)

Teaches skills to perform service checks and procedures to automotive foundation braking system and to identify components and types of ABS and traction control systems.

ASE 1020 - Basic Auto Electricity (2)

Introduces vehicle electricity and includes basic electrical theory, circuit designs, and wiring methods. It also focuses on multimeter usage and wiring diagrams.

ASE 1022 - Auto Elec Safety Systems (1)

Teaches the student to identify operation of vehicle lighting systems, Supplemental Inflatable Restraints (SIR), windshield wiper, driver warning systems and vehicle accessories.

ASE 1023 - Starting & Charging Systems (2)

Covers the operation, testing and servicing of vehicle battery, starting and charging systems. Includes voltage testing of starter and generator, load testing and maintenance of a battery.

ASE 1030 - General Engine Diagnosis (2)

Teaches students how to perform basic engine diagnosis to determine condition of engine. This will include engine support systems.

ASE 1032 - Ignition System Diag & Repair (2)

Focuses on lecture and related laboratory experiences in the diagnosis, service, adjustments and repair of various automotive ignition systems.

Prerequisite: Grade of C or higher in the following course: ASE 1030.

ASE 1034 - Autofuel & Emissions Syst I (2)

Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive fuel emission control systems, filter systems and spark plugs. Course also includes maintenance to diesel (DEF) systems.

ASE 1040 - Suspension and Steering I (2)

Focuses on lecture and related experiences in the diagnosis and service of suspensions and steering systems and their components.

ASE 1041 - Suspension and Steering II (2)

Covers design, diagnosis, inspection, and service of suspension and steering systems used on light trucks and automobiles. Course includes power steering and SRS service.

ASE 1050 - Man Drive Train & Axle Maint. (2)

Studies the operating principles and repair procedures relating to axle-shaft and universal joints.

ASE 1051 - Man Trans/Transaxles/Clutch I (2)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive manual transmissions, transaxles and clutches and related components.

ASE 1052 - Man Trans/Transax/Clutch II (2)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive differentials, four wheel and all-wheel drive units.

ASE 1053 - Auto Drive Axle O/H (1)

Teaches the student skills to check, inspect, and replace parts necessary to rebuild differential assembly.

ASE 1054 - Manual Trans/Axle Diags & Rpr (1)

Covers operation, diagnosis and repair procedures of manual transmission and transaxle assemblies.

ASE 1060 - Auto Engine Repair (2)

Focuses on lecture and laboratory experiences in the service of cylinder head, valve-train components and components of the cooling system. Course also includes engine removal and re-installation and re-mounting systems.

ASE 1061 - Engine Repair & Rebuild (3)

Focuses on lecture and laboratory experiences in the disassembly, diagnosis and reassembly of the automotive engine. Topics include the diagnostic and repair procedures for the engine block and head assemblies.

ASE 1062 - Automotive Engine Service (2)

Covers engine sealing requirements and repair procedures; engine fasteners, bolt torque and repair of fasteners. Course will also cover cooling system and basic engine maintenance.

ASE 1070 - Laboratory Experience I (0)

Continues to build upon the principles that are expected to be understood by students.

ASE 1071 - Laboratory Experience II (0)

Continues to build upon the principles that are expected to be understood by students.

ASE 2001 - Automotive Parts Management I (1)

Familiarizes the student with the job requirements and responsibilities of an automotive parts specialist. Included is instruction in the proper completion of parts invoices, repair orders, sales receipts and tickets, and other forms that are utilized in a parts business.

ASE 2002 - Automotive Service Management (2)

Provides orientation in areas such as shop management, customer relations, marketing, salesmanship and work repair orders along with their application to service stations, independent repair shops, dealerships and all other automotive service centers.

ASE 2003 - Automotive Parts Management II (2)

Familiarizes the student with handling and pricing procedures utilized in parts management including warehouse distribution, jobbing, retail and wholesale pricing. Workplace safety, stocking, shipping, and receiving, and managing employees are also covered.

ASE 2010 - Auto Pwr/ABS Brake Systems (2)

Covers the operation and theory of the modern automotive braking systems. Includes operation, diagnosis, service, and repair of the anti-lock braking systems, power assist units and machine operations of today's automobile.

ASE 2021 - Auto/Diesel Body Electrical (4)

Provides a comprehensive study of the theory, operation, diagnosis, and repair of vehicle accessories.

ASE 2031 - Auto Comp & Ignition Sys (2)

Focuses on lecture and laboratory experiences in the inspection and testing of typical computerized engine control systems.

ASE 2033 - Auto Fuel Inject/Emissions II (4)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of electronic fuel injection systems and modern exhaust systems.

ASE 2035 - Driveability & Diagnosis (2)

Emphasizes lecture and related laboratory experience in diagnostic techniques and the use of diagnostic scan tools, oscilloscopes, lab scopes, multi-meters and gas analyzers. Students diagnose live vehicle driveability problems.

ASE 2040 - Suspension and Steering III (2)

Covers operation of steering and power steering systems. It will also include different alignment types and procedures.

ASE 2050 - Auto Trans/Transaxle Service (1)

Focuses on practical methods of maintaining, servicing, and performing minor adjustments on an automatic transmission and transaxle.

ASE 2051 - Auto Trans/Transaxle Repair (3)

Covers diagnosis, principles of hydraulics, principles of electronic components, power flow, theory of operation, remove and re-install transmission/transaxle, and replacement of components.

ASE 2052 - Adv Automatic Trans/Transax (2)

Provides laboratory experiences with hands on approach in the areas that the student received training during previous automotive transmission classes.

ASE 2064 - Intro to HVAC Systems (1)

Covers basic operation of the Heating and Air Conditioning components.

ASE 2065 - HVAC Systems (4)

Emphasizes lecture and related laboratory experiences in the diagnosis and service of vehicle heating and air conditioning systems and their components.

ASE 2085 - Independent Study (0)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: Permission of instructor.

ASE 2087 - Cooperative Education (0)

Develops practical objectives assigned by an automotive employer providing an on-the-job learning experience at an approved automotive repair facility.

ASE 2182 - Internship: General (Summer) (0)

Emphasizes practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or (F.A.S.T.) Fundamental Automotive Systems Training (Chrysler) or others as required by the program track.

Offered: Summer.

ASL-American Sign Language Courses

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. Students must complete this course with a 'B' or higher or pass the ASL proficiency test with a score of at least 80% or better prior to registering for ASL 1122 if planning to enroll in the Interpreter Preparation Program.

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: Grade of B or higher in the following course: ASL 1121 or 80% or higher on the ASL1121 proficiency exam. Corequisite: Permission of instructor.

AST-Astronomy Courses

AST 1001 - Colorado Night Sky I (1)

Develops an appreciation of and competence in observational astronomy with the naked eye or binoculars, including knowledge of the seasonal and circumpolar constellations and of the location of interesting objects in those constellations. Emphasis is on deep sky observing, including various types of stars, nebula, clusters and galaxies. Basic tools of the astronomer are also covered. The focus is on observation rather than theory.

AST 1002 - Colorado Night Sky II (1)

Develops an appreciation of and competence in observational astronomy with the naked eye or small telescope, including knowledge of the seasonal and circumpolar constellations. Emphasis is on observing solar system objects, including planets and moons, comets and asteroids, meteor showers and the Sun. Basic tools of telescope astronomy are also covered. The emphasis is observation, rather than theory.

AST 1003 - Colorado Night Sky III (1)

Develops an appreciation of and competence in observational astronomy with the naked eye or small telescope. Introduces the use of images from major telescopes and spacecraft as a tool for experiencing the night sky. Special emphasis will be placed on the World Wide Telescope and what it has to offer. Rare observations such as supernovae, comets and solar activity will also be covered. Advanced tools of telescope astronomy and astrophotography may also be discussed. Emphasis is on observation rather than theory.

AST 1075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

AST 1077 - Special Topics (2)

Exploration of current topics, issues and activities related to one or more aspects of the named discipline.

AST 1085 - Independent Study (0)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

AST 1110 - Planetary Astronomy w/Lab: 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. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

AST 1120 - Stellar Astronomy w/Lab: SC1 (4)

Emphasizes the structure and life cycle of the stars, the sun, galaxies, and the universe as a whole, including cosmology and relativity. Incorporates laboratory experience. This is a statewide Guaranteed Transfer course in the GT- SC1 category.

Prerequisite: Grade of C or higher in the following courses: MAT 050 and CCR 092 or CCR 094 or equivalent placement scores.

AST 1140 - Astronomy Ancient Cultures: SC2 (3)

Introduces the study of archaeoastronomy and ethnoastronomy. Students will study the principles of naked eye astronomy and examine how those principles have been used for timekeeping, navigation, religion and ritual, political power, cosmology and worldview. Methods of the ethnoastronomer will be covered, including measurement of alignments, analysis of written records, examination of art and architecture and incorporation of general knowledge about the culture being studied. This is a statewide Guaranteed Transfer course in the GT-SC2 category.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

AST 1150 - Astrobiology: SC2 (3)

Introduces the interdisciplinary and scientific nature of the search for life in the universe, also known as astrobiology. Students will address the questions: "How does life begin and evolve?" "Is there life elsewhere in the universe?" Students will examine life on Earth, its origin and evolution. The possibilities of other life in the solar system and throughout the universe will be examined. Students will investigate the current state of exploration and the search for extraterrestrial life. This is a statewide Guaranteed Transfer course in the GT-SC2 category.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

AST 1160 - Cosmology: 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 is a statewide Guaranteed Transfer course in the GT-SC2 category.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

AST 2028 - Field Studies: Astronomy (4)

Involves in-depth field studies of astronomical phenomenon of specific regions both within and outside the United States. Trips lasting from one to fourteen days in length to study the area 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.

AUT-Auto Motorsports Technology Courses

AUT 1009 - Hi Perform Suspsn/Chassis Dsn (2)

Introduces the fundamentals of chassis types and components. Includes steering and suspension component theory, tire and wheel theory, chassis design and geometry theory as applied to oval track, drag race, and road race vehicles.

AUT 1010 - Hi Perfo Suspsn/Chassis Setup (4)

Introduces chassis set-up based on vehicle purpose. Incorporates chassis measurement, including ride heights, caster, camber, steering toe, ackerman, control arm angles, roll centers, and weight distribution. All measurements are taken and adjustments completed to allow the vehicle to perform as desired.

AUT 1016 - High Performance Brake Systems (2)

Introduces high performance brake systems as applied to racing vehicles.

AUT 1025 - Engines I (4)

Provides for individual study, enabling self-paced instruction and features an open entry, open exit system. Emphasizes video and computer technology. Includes operation and construction of the internal combustion engine, both domestic and foreign. Covers inspection, measuring, parts identification, and vehicle I.D. The student presents video and computer knowledge by use of mock-up engines with instructor supervision.

AUT 1036 - Intro to Racecar Body Fab (2)

Introduces a variety of techniques used in the forming of racecar body panels made up of various types of materials. Emphasizes sheet steel, aluminum, and composite plastics. Students practice the fabrication and finishing of body panels. Tools and equipment typically used in the industry are also covered.

AUT 1037 - Intro to Racecar Chassis Fab (2)

Introduces the student to various designs and methods for fabrication of racecar chassis and roll cage components. Covers body mounting techniques and suspension pick up points.

AUT 1077 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

BIO-Biology Courses

BIO 1004 - Biology: A Human Approach: 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: Grade C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

BIO 1005 - Science of Biology w/Lab: 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 is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

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.

BIO 1016 - Intro to Human Disease: SC2 (3)

Focused analysis of the causes and mechanics of human illness and death will be presented for each of the major human body systems. Selected diseases will be studied in greater detail including etiology, pathogenesis, epidemiology, sociology, and therapy. This is a statewide Guaranteed Transfer course in the GT-SC2 category.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

BIO 1111 - Gen College Biology I/Lab: 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 is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

BIO 1112 - Gen College Biology II/Lab:SC1 (5)

Examines the fundamental principles of ecology, evolution, classification, structure, and function in plants and animals. This course includes a laboratory experience. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

BIO 2101 - Human Anatomy & Phys I w/Lab: 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: Grade of C or higher in the following courses: BIO 1111, MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

BIO 2102 - Human Anatomy & Phys II w/Lab: 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: Grade of C or higher in the following courses: BIO 2101, MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

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: Grade of C or higher in the following courses: BIO 2101, MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores. Corequisite: BIO 2102.

BIO 2104 - Microbiology w/Lab: SC1 (4)

Designed for health science majors. Examines microorganisms with an emphasis on their structure, development, physiology, classification, and identification. The laboratory experience includes culturing, identifying, and controlling microorganisms with an emphasis on their role in infectious disease. This is a statewide Guaranteed Transfer course in the GT-SC1category.

Prerequisite: Grade of C or higher in the following courses: BIO 1111, MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

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: Grade of C or higher in the following courses: BIO 2101 and BIO 2102. BIO2102 may be taken as a corequisite. Corequisite: BIO 2102 may be taken as a corequisite.

BIO 2120 - General Zoology w/Lab: SC1 (5)

Focuses on the study of invertebrate and vertebrate animals and examines structure, evolutionary development, ecology, classification, physiology, reproduction, and zoogeography. A survey of zoological diversity emphasizing the characteristics, zoological contributions, and classification of animal phyla and major classes, this course requires 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: Grade of C or higher in the following courses: BIO 1111 or BIO 1112, MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

BIO 2121 - Botany w/Lab: 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: Grade of C or higher in the following courses: BIO 1111 or BIO 1112, MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

BIO 2124 - Genetics: 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: Grade of C or higher in the following courses: BIO 1111, MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

BIO 2175 - Special Topic (3-4)

Covers a specific topic within Biology, as determined by the instructor. Reflects the special expertise of the faculty and/or the special needs of the students.

Prerequisite: Grade of C or higher in the following courses: ENG 0092 or ENG 0094 or equivalent placement scores, and MAT 0250 or equivalent placement scores.

BIO 2181 - 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.

BIO 2185 - Independent Study (1)

Allows students to pursue a specific project within Biology. The student and instructor determine the topic, outline of work, and method of evaluation.

BIO 2228 - Field Biology: (destination) (4)

Focuses on the identification of organisms and the examination of ecological concepts and principles. The course involves in-depth field study of natural environments lasting at least seven days and requires hands-on laboratory and field experience including extensive hiking.

BTE-Business Technology Courses

BTE 1000 - Computer Keyboarding (1)

Designed for students who have minimal or no keyboarding skills. Introduces the touch method of keyboarding, as well as the basic operation and functions of the equipment. Emphasizes learning the alphanumeric keyboard, proper technique, and speed control.

BTE 1002 - Keyboarding Applications I (2)

Designed for students with minimal keyboarding skills. Introduces letters, tables, memos, and manuscripts. Emphasizes speed and accuracy.

BTE 1008 - Ten-Key by Touch (1)

Introduces touch control of the ten-key pad. Emphasizes the development of speed and accuracy using proper technique.

BTE 1011 - Keyboarding Speedbuilding I (2)

Designed to increase speed and improve accuracy in keyboarding on the PC through the use of correct techniques and concentrated effort.

BTE 1025 - Records Management (3)

Instructs on how records are created, stored, and retrieved. Covers the basic filing rules - classifying, indexing, coding, storing, and retrieving as applied to basic methods - alphabetic, chronological, subject, numeric, and geographic. Emphasizes 'hands-on' records management through the use of simulations, which includes manual and/or computer software.

Prerequisite: Acceptable keyboarding proficiency.

BTE 1066 - Business Editing Skills (3)

Provides proofreading techniques and reviews spelling, punctuation, grammar, and word processing formats on various types of business documents and worksheets.

BTE 2080 - 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.

BUS-Business Courses

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)

Focuses on the operation of the American business system. Covers fundamentals of the economy, careers and opportunities, marketing, management, production, governmental regulations, tools of business and social responsibilities.

BUS 1016 - Personal Finance (3)

Surveys the basic personal financial needs of most individuals. Emphasizes the basics of budgeting and buying, saving and borrowing money, the intricacies of home ownership, income tax and investments, and the wise use of insurance, wills and trusts.

BUS 1018 - Business Survival Skills (3)

Provides an overall perspective for the student to understand the current domestic and world business environment and how the student as an employee fits into that environment. Roles and responsibilities of the business and the employees will be studied especially as they relate to alternatives for increasing positive impact in the workplace. The focus will be on practical skills application.

BUS 1020 - Introduction to E-Commerce (3)

Provides an introduction to electronic commerce; the business trend of the future. Covers definition of e-commerce, technology and software requirements, security issues, electronic payment and marketing strategies. Focuses on what to expect when creating a dot com as well as the business-to-business use of e-commerce.

BUS 1021 - Basic Workplace Skills (1)

Examines techniques for communicating effectively on the job including both verbal and written communication; identifies the roles of individuals and companies and necessary critical thinking and problem solving skills; examines relationship skills, effective self-presentation, and workplace issues such as sexual harassment, stress, and substance abuse.

BUS 1075 - Special Topics in Business (3)

Provides students with a vehicle to pursue special topics of interest in business. The content of this course is designed on an as needed basis to provide current, up-to-date information.

BUS 1076 - Special Topics (3)

Provides students with a vehicle to pursue indepth exploration of special topics of interest.

BUS 1092 - Service Learning (0)

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.

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 devoted to economic regulation, social regulation, regulation and laws impacting labor-management issues, and environmental concerns. Students develop an understanding of the role of law in social, political, and economic change.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores or permission of instructor. BUS 1015 is suggested.

BUS 2017 - Business Communications (3)

Emphasizes effective business writing and cover letters, memoranda, reports, application letters, and resumes. Includes the fundamentals of business communication and an introduction to international communication.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores or permission of instructor.

BUS 2026 - Business Statistics (3)

Focuses on statistical study, descriptive statistics, probability, binomial distribution, index numbers, time series, decision theory, confidence intervals, linear regression, and correlation. Intended for the business major.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 or equivalent placement scores.

BUS 2050 - Intro to Nonprofit Orgs (3)

Explores the evolution and role of the nonprofit sector in modern society and provides an overview of the most important and unique elements of nonprofit work. The course provides an understanding of, and practical experience with, the key issues and challenges facing nonprofit organizations. Topics include governance, ethics, legal issues, advocacy, strategic and financial management, diversity and cultural competency, and the role of volunteers.

BUS 2051 - Design and Evaluation-NPO (3)

Introduces the analytical, critical thinking, and problem-solving skills required for effective program design, evaluation, and data-driven decision-making. This course includes major concepts in program design and evaluation such as the steps of evaluation, logic modeling, evaluation planning, stakeholders, ethical considerations, cultural humility, probable issues, evaluation approaches, fundamentals of program design and implementation, and reporting.

BUS 2052 - Bldg Financial Support - NPOs (3)

Examines the many ways nonprofit organizations generate income to support their mission-driven programs and activities including private and public grants, donations from individuals and corporations, impact investing, and social enterprise. This course engages students in developing practical skills and knowledge to carry out effective fundraising strategies and build sustainable support for nonprofit organizations including fundraising campaigns, systems, processes, and community engagement techniques.

BUS 2053 - Nonprofit Financial Management (3)

Explores the financial management of a nonprofit organization including decision making, strategic planning, budgeting, managing cash flow, fundraising, and telling a compelling story. Emphasis will be placed on using financial reports to determine the direction of an organization, making necessary changes in direction, and effectively communicating the financial status and overall health of the organization. Using an ethical foundation to capture, report, and interpret transactions is a core principle of this class.

BUS 2075 - Special Topics (1-3)

Provides students with a vehicle to pursue special topics of interest in business. The content of this course is designed on an as needed basis to provide current, up-to-date information.

Prerequisite: Permission of instructor.

BUS 2077 - Special Topics (3)

Provides students with a vehicle to pursue indepth exploration of special topics of interest.

BUS 2078 - Seminar/Workshop (1-3)

Provides students with an experiential learning opportunity.

Prerequisite: Permission of instructor.

BUS 2081 - Internship (1-3)

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.

Prerequisite: Permission of instructor.

BUS 2085 - Independent Study (1-3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: Permission of instructor.

BUS 2089 - Capstone (1-12)

Demonstrates the culmination of learning within a given program of study.

Prerequisite: Permission of instructor.

CAD-Computer Assisted Drafting Courses

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.

CAD 1102 - Computer Aided Drafting/2D II (3)

Focuses on intermediate 2D Computer aided drafting skills using the AutoCAD software. Includes blocks, blocks & dynamic blocks, hatching, isometric drawings, advanced dimensioning and dimension variables, layouts, paper space and viewports, templates, external references, attributes, raster images, & printing/plotting.

Prerequisite: Grade of C or higher in the following course: 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 1115 - Rhino (3)

Introduces the Rhino modeling platform, systems and plug-ins and creation and modification of 3-D objects and scenes. Focuses on NURBS systems, Rhino plug-ins, and Rhino workflow processes. Examines how Rhino is used in various industries. Prepares students to create physical models and renderings using Rhino.

CAD 2080 - Internship (1-6)

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 instructor.

CAD 2085 - Independent Study (6)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

CAD 2089 - Capstone (6)

Provides a demonstrated culmination of learning within a given program of study.

Prerequisite: Grade of C or higher in the following courses: CAD 2221 or CAD 2452.

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.

Prerequisite: CAD 1102 or permission of instructor.

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: Grade of C or higher in the following course: CAD 224.

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 2221.

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.

Prerequisite: Grade of C or higher in the following courses: CAD 1101.

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: Grade of C or higher in the following course: CAD 1102 or permission of instructor.

CAD 2450 - SolidWorks Basics (6)

Introduces fundamental skills and concepts of SolidWorks software. This course emphasizes the design process and takes a task-based approach to training processes to apply commands, options, and menus necessary to complete a design task.

CAD 2451 - SolidWorks Intermediate (6)

Focuses on combining SolidWorks part designs into SolidWorks assemblies. This course introduces advanced techniques of surface modeling and interference between components before they are manufactured by studying the motion and behavior of the entire machine in the operational stage.

Prerequisite: Grade of C or higher in the following course: CAD 2450.

CAD 2452 - SolidWorks Advanced (6)

Focuses on advanced techniques for translating conceptual design into manufacturing reality. Projects include parts, assemblies, drawings, bill of materials, revisions, communication, time management, and task prioritization. Course emphasis is on sheet metal, weldments, molds (casting and injection), leverage, large assemblies, advanced motion study, and miscellaneous other advanced commands and techniques.

Prerequisite: Grade of C or higher in the following course: CAD 2451.

CAD 2458 - Intro 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 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: Grade of C or higher in the following course: CAD 2400 or permission of instructor.

CAR-Carpentry Courses

CAR 1002 - Hand and Power Tools (1)

Focuses on basic hand and power tools including stationary tools. Emphasizes a hands-on approach to proper and safe use of these tools as it applies to the construction environment and is taught in conjunction with a lab or framing class.

CAR 1003 - Carpentry Basics (4)

Provides a basic introduction to construction work for all crafts, safety concerns and procedures, and the safety and use of hand and power tools. This course specifically applies to construction work.

CAR 1005 - Job Site Layout/Blueprint Read (1)

Introduces blue-print reading and how they apply to the construction site. Includes in-depth introduction to site layout (materials and methods).

CAR 1015 - Form & Foundation Systems (1)

Covers materials and methods for concrete forms and foundations. Includes various reinforcement methods such as re-bar and welded-wire fabric.

CAR 1022 - Wall Framing (1)

Focuses on the procedures for laying out and framing walls and ceilings, including roughing-in door and window openings, construction corners and partition Ts, bracing walls and ceilings, and applying sheathing.

CAR 1023 - Roof Framing (1)

Describes the various kinds of roofs and contains instructions for laying out rafters for gable roofs, hip roofs and valley intersections. Coverage includes both stick-built and truss-built roofs.

CAR 1025 - Roofing Materials & Methods (1)

Covers application techniques and estimation of asphalt and wood roofing products and accessories including gutters and flashing.

CAR 1030 - Windows and Exterior Doors (1)

Describes the various types of windows, skylights, and exterior doors and provides instructions for installing them. Includes instructions for installing weather-stripping and locksets.

CAR 1033 - Construction Framing & Safety (4)

Utilizes hands-on techniques to illustrate basic framing methods and materials. Floor/Wall/and Roof framing will be discussed/demonstrated and taught. There will be extensive utilization of modern and western residential framing methods. The course will also include 10 hours of OSHA approved safety instruction, which will qualify the student for their 10 hour safety card.

Corequisite: OSH 1310.

CAR 1034 - Exterior Finishes and Trim (4)

Utilizes hands-on techniques to illustrate exterior moisture, trim, and exterior door and window installation. Student will explore various residential materials and methods. Estimation of time and material will be discussed as well as general business practices.

Corequisite: CAR 1003 or permission of instructors.

CAR 1035 - Thermal/Moisture Methods/Mat (1)

Focuses on selection and installation of various types of insulating materials in walls, floors, and attics. Covers the uses and installation practices for vapor barriers and waterproofing materials.

CAR 1036 - Remodeling, Renovation/Addns (4)

Covers conversions of attic and basement spaces to usable living spaces and additions for renovation to existing residential structures, including kitchens and baths. Examines materials scheduling, estimation, and construction methods.

Corequisite: CAR 1003 or permission of instructor.

CAR 1046 - Interior Finish/Drywall Const (1)

Covers the use of gypsum wall board and the techniques of concealing joints and fasteners, construction methods, estimation and a variety of texture finishes.

CAR 1050 - Interior Trim - General (1)

Covers material choices and installation techniques of various interior trim, including interior doors, baseboard, and casement. Includes an overview of additional interior trim choices.

CAR 1053 - Int Trim: Cabinet/Countertops (1)

Covers the selection/installation/terminology of factory built cabinets and countertops. Includes various types and design and examines estimation of cost.

CAR 1055 - Interior Trim and Built-ins (4)

Covers design and building processes for custom built-in cabinetry. Explores the variety of materials and methods of work to create custom building from closet storage shelves to a built-in entertainment center.

Corequisite: CAR 1003 or permission of instruction.

CAR 1056 - Shop Tools-Stat/Hand/Portable (4)

Covers the safe use and care of stationary, hand, and portable tools. Develops skills through tool utilization to pass competency and safety tests for each tool.

CAR 1060 - Floor Finishes (1)

Covers installation and finishing of hardwood floors, laminate/engineered floors, and tile. Includes discussion on advantages and disadvantages of various choices available.

CAR 1065 - Shop Carpentry (4)

Focuses on the non-site, shop carpenter and includes jig and pattern making, stationary power tool maintenance and adjustment, machining of woods, and techniques unique to shops, cabinetmakers and millworkers.

Corequisite: CAR 1003 or permission of instructor.

CAR 1066 - Stair Design & Construction (4)

Focuses on both site and off-site stair lay-out and construction. Students have a chance to explore various techniques for building the stairs and millwork involved in the construction and installation of handrail assemblies.

Corequisite: CAR 1003 or permission of instructor.

CAR 1070 - Clinical: Construction Lab I ()

Continues to build upon the principles that are expected to be understood by students in the construction discipline.

Corequisite: OSH 1310.

CAR 1075 - Special Topics (0.5)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CAR 1076 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CAR 2053 - Adv Int Trim -Cabinet/Ctrtops (4)

Emphasizes an in-depth/hands-on look at all components of cabinet-making, installation and countertops. Includes construction of traditional (face-frame) and European cabinets. Covers hardware applications and installation, and countertop construction, ranging from laminates to solid surface.

Corequisite: CAR 1056 or permission of instructor.

CAR 2075 - Special Topic (1-6)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Corequisite: CAR 1056 or permission of instructor.

CAR 2080 - Internship (4-12)

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location, and with the direct guidance of the instructor.

Corequisite: Permission of instructor.

CAR 2082 - Internship (0.5-12)

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

Corequisite: Permission of instructor.

CAR 2085 - Independent Study (0.5-12)

Meets the individual needs of student. Students engage in intensive study or research under the direction of a qualified instructor.

Corequisite: Permission of instructor.

CCR-College Composition &

Reading Courses

CCR 0092 - Composition & Reading (5)

Integrates and contextualizes college level reading and writing. Students will read and understand complex materials and respond to ideas and information through writing informative and/or persuasive texts. For students who score NGAccuplacer Writing between 225 - 235.

Prerequisite: Appropriate placement scores.

Cross-Listed as: ENG 0092.

CCR 0094 - College Composition and Reading: Studio 121 (3)

Integrates and contextualizes reading and writing strategies tailored to co-requisite ENG 1021 coursework. Students will read and understand complex materials and respond to ideas and information through writing informative and/or persuasive texts. Any student enrolled in CCR 0094 is required to co-enroll in ENG 1021. For students who score NGAccuplacer Writing 236 - 245.

Prerequisite: Grade of C or higher in the following course: CCR 0092 or equivalent placement scores. Corequisite: ENG 1021.

Cross-Listed as: ENG 0094.

CHE-Chemistry Courses

CHE 1011 - Intro to Chemistry I/Lab: 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. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: MAT 0250 and CCR 0092 or CCR 0094 or equivalent placement scores.

CHE 1111 - Gen College Chem I/Lab: 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. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: CHE 1011 or one year of high school chemistry and MAT 1340 or equivalent.

CHE 1112 - Gen College Chem II/Lab: 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. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following course: CHE 1111.

CHE 2075 - Special Topics (0.5-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

CHE 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.

CHE 2085 - Independent Study (1)

Provides the opportunity for the highly motivated student to engage in intensive study and research on a specified topic under the direction of a faculty member. Allows a student to complete a course in a semester when the course has not been offered or has been canceled. The option to make independent study available is at the discretion of qualified faculty and the department chair. The student is limited to the number of independent study courses taken per semester.

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, reaction mechanisms such as SN1, SN2, E1 and E2. Laboratory experiments demonstrate the above concepts plus the laboratory techniques associated with organic chemistry.

Prerequisite: Grade of C or higher in the following course: 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: Grade of C or higher in the following course: CHE 2111.

CIS-Computer Information System Courses

CIS 1010 - Intro to Computing Technology (1)

Introduces basic computing technology with an emphasis on document creation and storage. Use of technology for email, web surfing, and access to course materials is included.

CIS 1015 - Intro to Computer Info Sys (3)

Focuses on an overview of the needs for and roles of computer information systems. Emphasizes computer requirements in organizations, history, hardware functions, programming, systems development, and computer operations. Introduces computer applications.

CIS 1018 - Intro 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 1028 - Operating System: (3)

Introduces the functions and capabilities of an operating system, including configuring and modifying the operating system environment.

CIS 1031 - Word Processing I (1)

Gives the student an introductory working knowledge of word processing. The student will create, edit, format, save, and print documents. The student will use spell check, grammar check, and thesaurus features. The student will format text, paragraphs, and pages, change margins and use the find and replace feature as well as create envelopes and labels.

CIS 1035 - Complete Word Processing (3)

Explores a complete array of word processing skills. The skills needed to create, edit, format, and print documents are covered. Other topics include character, paragraph, and page formats, the use of spelling checkers and thesaurus, hyphenation, tables, mail merge, document design, and graphics.

Prerequisite: Grade of C or higher in the following courses: CIS 1018 or CIS 1028 or a working knowledge of Windows.

CIS 1045 - Intro to Desktop Database (3)

Explores a complete array of database skills. Includes table, query, form, and report creation and modification. Other topics include application integration and automation of database tasks within the database.

Prerequisite: Grade of C or higher in the following courses: CIS 1018 or CIS 1028 or a working knowledge of Windows.

CIS 1055 - Complete Spreadsheets (3)

Exposes the student to a wide range of uses of the electronic spreadsheet with special emphasis on using it as a business tool. Includes fundamentals and terms, creating and saving workbooks, entering and using formulas, formatting, printing, multiple-page workbooks, creating charts, entering and using functions, managing lists, and simple macros.

Prerequisite: Grade of C or higher in the following courses: CIS 1018 or CIS 1028 or a working knowledge of Windows.

CIS 1065 - Complete Presentation Graphics (3)

Focuses on the development of presentation graphics materials including graphs, charts, illustrations, and diagrams. Emphasizes effective communication through computerized presentations. Covers features of the software and effective presentation techniques.

Prerequisite: Grade of C or higher in the following courses: CIS 1018 or CIS 1028 or a working knowledge of Windows.

CIS 1075 - Special Topics (1)

Provides students with a vehicle to pursue in-depth exploration of special topics of interest.

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: Grade of C or higher in the following course: CIS 1018.

CIS 2020 - Fundamentals of Unix (3)

Covers the structure and fundamentals of the UNIX operating system. Includes the file system and file processing, various utility programs, shell, multi-user operation, text processing and communications.

Prerequisite: Grade of C or higher in the following course: CSC 1019.

CIS 2040 - Database Design & 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.

Prerequisite: Grade of C or higher in the following course: CSC 1019.
Corequisite: CIS 2043.

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: Grade of C or higher in the following course: CSC 1019.
Corequisite: CIS 2040.

CIS 2046 - Oracle Database Admin 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, tablespaces, data files, control files, redo log files and rollback segments.

CIS 2067 - Mgmt 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 interrelations 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 (3-12)

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

CIS 2089 - Capstone (3)

Serves as the capstone course for CIS majors. Incorporates projects that allow students to develop advanced techniques and assemble information from different courses. Most projects will include the creation of interactive application programs for the non-computer user and require research beyond the classroom to prepare the student for entry level employment in a variety of situations.

Offered: Spring Only.

CNG-Computer & Networking Tech Courses

CNG 1001 - Networking Fundamentals (3)

Introduces network fundamentals using the OSI (Open Systems Interconnection) model and TCP/IP (Transmission Control Protocol/Internet Protocol) suite, fundamentals of Ethernet, IP addressing, and building simple LANs (Local Area Networks).

CNG 1002 - Local Area Networks (3)

Introduces Local Area Networking. Focuses on discussions and demonstrations of planning, installing, and supporting networks.

CNG 1004 - Intro to TCP/IP (3)

Covers the basic elements of the Transmission Control Protocol and the Internet Protocol, the basic technologies that implement the Internet and computer networking. In addition to TCP and IP the course covers networking media, link layer, network layer, and transport layer protocols. Also included are routing, broadcast, multicast, and network address translation. IP version 4 and IP version 6 are both covered.

CNG 1021 - Computer Technician I: A+ (4)

Provides students with an in-depth look at personal computer hardware, introduces networking concepts, and covers operational procedures and troubleshooting, all of which are necessary for a successful entry-level computer service technician position. Provides extensive hands-on work with computer systems, PC setup and configuration, and basic maintenance and troubleshooting. This course helps prepare you for the first CompTIA A+ Exam.

Corequisite: CNG 1022.

CNG 1022 - Computer Technician II: A+ (4)

Provides students with an in-depth look at desktop and mobile Operating System support, maintenance, and troubleshooting, and an overview of security concepts, and interpersonal skills, all of which are necessary for a successful entry-level computer service technician position. Provides extensive hands-on work with current operating systems, including using common GUI and command line tools, registry editing, system backup and recovery, and advanced troubleshooting. This course helps prepare you for the second CompTIA A+ Exam.

Prerequisite: Grade of C or higher in the following course: CNG 1021.

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.

Prerequisite: Working knowledge of computers.

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: Grade of C or higher in the following course: CNG 1024.

CNG 1031 - Prin of Information Assurance (3)

Provides skills and knowledge required to survey key issues associated with protecting information assets, determine the levels of protection and response to security incidents, and design a consistent, reasonable information security system, 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.

Prerequisite: Prior College Comp Networking 101 or Undergraduate level CNG 1001 Minimum Grade of C or Prior College Comp Networking 125 or Undergraduate level CNG 1025 Minimum Grade of C. Corequisite: CNG 1031.

CNG 1033 - Fire Walls/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: Grade of C or higher in the following courses: CIS 2020, CNG 1032, and CNG 1001 or CNG 1025, or equivalent experience or permission of instructor.

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.

Prerequisite: Grade of C or higher in the following course: CNG 1031 or permission of instructor.

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.

Prerequisite: Grade of C or higher in the following course: CNG 1032.

CNG 1080 - Internship I (0)

Provides the student with an introduction to personal computer repair in the work place.

CNG 2002 - Unix/Linux Server Admin (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: Grade of C or higher in the following course: CIS 2020.

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.

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: Grade of C or higher in the following course: CNG 1022.

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.

Prerequisite: Grade of C or higher in the following course: CNG 2002 and CNG 1012 or equivalent experience or permission of instructor.

CNG 2041 - Information Storage & Mgmt (3)

Teaches students to configure, manage, and backup data using current information storage technologies.

Prerequisite: Grade of C or higher in the following course: CNG 2040 or equivalent experience or permission of instructor.

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: Grade of C or higher in the following courses: CNG 1001 and CNG 1025.

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: Grade of C or higher in the following courses: CIS 2020 and CNG 1033 or equivalent experience or permission of instructor.
Corequisite: CNG 2057.

CNG 2057 - Network Defense/Countermeasures (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: Grade of C or higher in the following courses: CIS 2020 and CNG 1033 or equivalent experience or permission of instructor.
Corequisite: CNG 2056.

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: Grade of C or higher in the following courses: CIS 2020 and CNG 2056 or equivalent experience or permission of instructor.
Corequisite: CNG 2059.

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: Grade of C or higher in the following courses: CIS 2020 and CNG 2057 or equivalent experience or permission of instructor.
Corequisite: CNG 2058.

CNG 2060 - CISCO Network Associate I (5)

Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. Includes IP addressing and fundamentals of Ethernet concepts, media and operations.

CNG 2061 - CISCO Network Associate II (5)

Introduces the architecture, components, and operations of routers and switches.

Prerequisite: Grade of C or higher in the following course: CNG 2060.

CNG 2062 - CISCO Network Associate III (5)

Explores the architecture, components and operations of routers and switches in a large and more complex network with advanced functionality.

Prerequisite: Grade of C or higher in the following course: CNG 2061.

CNG 2063 - CISCO Network Associate IV (5)

Implements WAN technologies and network services required by converged applications in a complex switched and routed networks.

Prerequisite: Grade of C or higher in the following course: CNG 2062.

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.

Prerequisite: Permission of instructor.

CNG 2089 - Capstone (0)

Provides a demonstrated culmination of learning within a given program of study.

COM-Communication Courses

COM 1002 - Collegiate Communication (1)

Promotes student success at the community college level and beyond by exploring effective communication, self-concept, self-esteem, self-perception, attitude, and goal setting. This course also examines personal, health, and finance management. This course includes communication skills for leadership and community development, diversity awareness, and achieving successful academic performance and overcoming adversity.

COM 1075 - Special Topics (1-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

COM 1085 - Independent Study (1-12)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

COM 1105 - Career Communication (3)

Develops skills needed in obtaining and keeping a job. Includes job searching, applications, resumes, interviews, and the dynamics of customer, peer, and managerial relationships. Emphasizes speaking, writing, listening, critical reading skills, and vocabulary development essential to the employment world.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

COM 1250 - Interpersonal Comm: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

COM 1260 - Communication in Healthcare (3)

Covers interactive concerns in settings related to patient-client care. This class includes discussions of diverse cultures, client interaction, and family/caregiver issues. The course addresses the concerns of attitude, office politics, teamwork, self-initiative, and conflict management as specifically experienced in the patient-as-client setting.

COM 1300 - Comm and Popular Culture: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

COM 2063 - Conflict Resolution (1)

Focuses on handling conflict productively. Students gain insights into the roots of conflict and engage in skill practice in mediating interpersonal conflicts. The emphasis is on conflict prevention.

COM 2065 - Effective Presentations (1)

Focuses on effective presentation skills used in professional settings including conferences, briefings, training sessions, and sales presentations. Emphasizes formats, strategies, and presentation tips and enables the student to develop and practice these skills.

COM 2075 - Special Topics (0.5-6)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

COM 2080 - Internship (0-12)

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

COM 2085 - Independent Study (0.5-6)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

COM 2160 - Advanced Public Speaking (3)

Emphasizes the continued study of rhetorical theory and analysis as it relates to public speaking.

COM 2220 - Group Communication: SS3 (3)

Examines group communication theories with an emphasis on leadership and group behaviors. The course provides opportunities for group participation.

Offered: Spring Only.

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 Comm: SS3 (3)

Explores the link between culture and communication and will develop and/or enhance communication skills and the abilities appropriate to a multicultural society. Emphasis will be on understanding diversity within and across cultures. Relevant concepts include perception, worldview, context, ethics, language, and nonverbal communication. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

CON-Construction Technology Courses

CON 1005 - Construction Technology (4)

Explores a variety of new software applications now available for the construction trade. Introduces computer applications such as CAD, scheduling, estimating, and accounting programs. Explores technology choices and compares them.

CON 1028 - Cost Estimation (2)

Provides an overview of the estimation process. Bid requirements, and package are discussed along with an introduction to the CSI divisions.

CON 1030 - Blueprint Reading (2)

Focuses on the techniques for reading and using blueprints and specifications with an emphasis placed on those drawing and types of information that are relevant to the carpentry craft.

CON 1045 - Construction Project Mgmt I (2)

Covers the principles of project planning, scheduling, estimating and management. The participant learns the basic skills required to supervise personnel, with the introduction of technologies as they become commonly accepted.

CON 1056 - Building Permits/Licensing (4)

Covers the governmental regulations concerning building and the process through which these regulations are enforced including whom to talk to, what to do, when to do the inspection process, how to obtain a building permit and the process of securing a variance.

COS-Cosmetology Courses

COS 1003 - Intro Hair and Scalp (1)

Introduces various types of scalp treatments, shampoos, and conditioners. This course covers hair and scalp disorders, product knowledge, and proper massage techniques. This course provides training in a lab or classroom setting.

COS 1010 - Intro Color (2)

Introduces theory pertaining to the law of color, theory of color, chemistry of color, product knowledge, and analysis of hair and scalp. This course covers basic application techniques and procedures for the application of haircolor.

COS 1011 - Inter I Color (2)

Expands on haircoloring theory and practical application of color products, formulations of color, level and shades of color. Students will learn application techniques in a specialized class or in a supervised salon setting.

COS 1020 - Intro Cutting (2)

Introduces haircutting theory relevant to patron protection, angles, elevations, and the analysis of hair textures as related to hair cutting procedures. This course covers proper use and care of hair cutting implements, basic hair cutting techniques using various cutting implements, and disinfection and sanitation procedures as they relate to haircutting.

COS 1021 - Inter I Cutting (2)

Expands on basic haircutting theory incorporating facial shapes, head and body forms to determine the appropriate techniques required to complete a client haircut. Students will apply hair cutting techniques in specialized classes or in the supervised salon.

COS 1030 - Intro Styling (2)

Combines theory with the practical application of hairstyling. This course covers roller placement, hair molding and shaping, pin curls, finger waves, comb-out techniques, air forming, thermal straightening, or curling for short to long hair.

COS 1031 - Inter I Styling (2)

This course covers the accepted methods of styling hair, air forming, roller sets, finger waves, pin curls, braiding, and hair pressing.

COS 1040 - Intro to Chemical Texture (1)

Introduces a combination of theory and practice focusing on the analysis of hair and scalp, proper equipment and product knowledge. Includes basic techniques in permanent waving and chemical relaxing. Provides training in a classroom or lab setting on mannequins or live models.

COS 1041 - Intermed I: Chemical Texture (1)

Emphasizes theory and practical application of chemical texture, including permanent waves and chemical relaxers, in a supervised salon setting. Students will practice different wrapping techniques required by trend styles in a classroom or salon setting.

COS 1050 - Laws, Rules, and Regulations (1)

This course covers laws, rules, and regulations governing the beauty industry in Colorado and accountability for the student, licensed individual, salons, and school owners.

COS 1060 - Intro to Infection Control (2)

This course covers various methods of sanitation, disinfection; and principles of workplace safety, infection control and prevention. Topics presented in this course include: classroom study of bacteriology, chemistry of cleaning versus disinfecting products that are used in the cosmetology industry, and terminology dealing with infection control.

COS 1061 - Inter I: Infection Control (1)

This course focuses on the theory and daily practice of proper methods of disinfection, sanitation and safety procedures as related to all phases of cosmetology. Topics presented in this course include: terminology and training of disinfection, sanitation and safety procedures, and customer service in a supervised salon setting or specialized class.

COS 1075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

COS 1076 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

COS 2003 - Inter I: Hair and Scalp (1)

This course covers theory and practical training in shampoos, rinses, and conditioners and examines advanced techniques to prepare the student for employment. Instruction includes preparation for the Colorado State Board Licensing Examination for shampoos, rinses, and conditioners.

COS 2010 - Inter II Color (2)

This course covers theory and practical application of color products, formulations of color, level and shades of color. Students will practice haircoloring techniques in a specialized class or in a supervised salon setting.

COS 2011 - Adv Color (2)

This course covers advanced theory and practical techniques in haircoloring. Course covers the recognition of color problems and color correction procedures in preparation for the Colorado State Board Licensing Examination. Topics in this course include: advanced techniques, color formulation, and product knowledge.

COS 2020 - Inter II Cutting (2)

This course covers haircutting theory related to facial shapes, head and body forms to determine the techniques necessary for client's specified haircut and practical applications of haircutting techniques for various client requests.

COS 2021 - Adv Cutting (2)

This course covers advanced haircutting techniques utilizing multiple cutting tools and emphasizes current fashion trends and preparation for the Colorado State Licensure examination.

COS 2030 - Inter II Styling (2)

This course covers accepted methods of styling hair, including: air forming, roller sets, iron sets, finger waves, braiding and hair pressing. Students will practice hairstyling techniques for client purposes in specialized classes or in a supervised salon setting.

COS 2031 - Adv Styling (1)

This course covers hairstyling theory and advanced techniques in all phases of hair styling to prepare the student for employment. Training is a combination of supervised salon work and specialized classes. Students will prepare for the Colorado State Board Licensing Examination.

COS 2040 - Intermediate II: Chem Texture (1)

This course covers theory of chemical texture and practical application of permanent waves and chemical relaxers in specialized classes or a supervised salon setting. Students will practice different wrapping techniques required by trend styles or per client request.

COS 2041 - Advanced Chemical Texture (1)

This course covers advanced techniques for chemical texture and current industry standards of practice to prepare the student for employment and the State Board Licensing Examination. Instruction is provided in specialized classes or supervised salon setting.

COS 2050 - Bus Mgmt/Per Skills/Ethics (1)

This course covers salon management business practices and the knowledge and skills necessary to build a successful business. Topics covered in this course include: basic business management, interpersonal skills, basic techniques in salesmanship and customer services, job readiness skills, and professional ethics.

COS 2060 - Inter II: Infection Control (2)

This course covers infection control theory and practice of proper methods of sterilization, disinfection, sanitation, and safety procedures as related to all phases of the industry. Topics for this course include: terminology and training of disinfection, sanitation, and safety procedures. The individual's responsibility to provide a safe work environment is practiced.

COS 2061 - Adv Infection Control (1)

This course covers advanced training on decontamination and safety practices in a supervised salon and/or classroom setting and primarily focuses on student preparation for the Colorado State Board Licensing Examination in decontamination and safety for all aspects of the industry. Topics for this course include: Occupational Safety and Health Administration (OSHA) requirements for schools and salons.

COS 2062 - Adv II Disinfec/Sanitac/Safety (3)

This course is the extra hours/credits required for the hairstylist program, per State Board of Colorado Barber/Cosmetology Board. Provides advanced training on decontamination and safety practices in a supervised salon and/or classroom setting. Examines advanced techniques that prepare the student for employment. Includes student preparation for the State Board Licensing Examination in decontamination and safety for all aspects of the industry. Study of OSHA requirements for schools and salon are done in a theory or practical setting.

CRJ-Criminal Justice Courses

CRJ 1010 - Intro to Criminal Justice: 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. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores..

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 procedures 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 1051 - Domestic Violence (3)

Examines theories, issues, legal strategies, and intervention applicable to abuse in intimate relationships.

CRJ 1052 - Sexual Assault (3)

Examines sexual assault beginning with definitions and describing the degrees of sexual assault and the penalties and realities of punishment. Covers myths, statistics, services, treatment and prevention. Both the rapist and the adolescent offender are profiled. Emphasizes the proactive approach with regard to prevention.

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 2010 - Constitutional Law (3)

Focuses on the powers of government as they are allocated and defined by the United States Constitution. Includes intensive analysis of United States Supreme Court decisions.

CRJ 2011 - Criminal Investigation II (3)

Builds on CRJ 209 with focus on follow-up investigation including an examination of death in all its aspects.

CRJ 2012 - Criminal Investigation III (2)

Focuses on an in-depth study of the principles of conducting a complete and systematic interview and/or interrogation. Examines the psychological dynamics of persons falsifying information. Includes confessions, undercover operations, surveillance techniques, and survival skills unique to undercover operants.

CRJ 2020 - Human Rel/Social Conflict (3)

Exploration of the environmental, organizational and socio-psychological dimensions of social control. Includes the study of individual attitudes, beliefs and behavior involved in role conflicts, community relations and conflict management in the social structure.

CRJ 2025 - Crisis Intervention (3)

Exploration of information and application of crisis theories in working with diverse populations. Understanding of the interventionist role with regards to the field of crisis intervention.

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 Forensic Sci/Criminalist (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 - CRJ 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. An analysis of the 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 2075 - Special Topics (1-6)

Provides students with the ability to pursue in depth exploration of special topics of interest.

CRJ 2080 - Internship (1-6)

Provides placement of the student into the criminal justice field to integrate theory with practice.

Prerequisite: Permission of internship adviser and CRJ coordinators.

CRJ 2085 - Independent Study (1-6)

This course meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: Permission of instructor.

CRJ 2089 - Capstone (1)

Provides a demonstrated culmination of learning within a given program of study.

Prerequisite: Permission of instructor.

CSC-Computer Science Courses**CSC 1005 - Computer Literacy (3)**

Introduces students to current technologies. Special focus on ensuring students become technologically competent and computer literate. Emphasis is placed on technology fundamentals and terminology through the evaluation of hardware and software. Provides students with a working knowledge of operating system use, file management and security. Introduces the internet as a research and communication tool. Application software is covered to ensure the fundamental computer skills for personal, academic and business use are obtained.

CSC 1019 - Intro. to Programming (lang) (3)

Focuses on a general introduction to computer programming. Emphasizes the design and implementation of structured and logically correct programs with good documentation. Focuses on basic programming concepts, including numbering systems, control structures, modularization, and data processing. A structured programming language is used to implement the student's program designs.

Prerequisite: Computer basics and literacy (file management, Windows, and internet navigation).

CSC 1026 - Game Design & Development (3)

Combines problem-solving techniques with computer game design and implementation to introduce the student to basic gaming and computer science concepts. Students design, implement, and test computer games using software that allows for basic game creation through a wide variety of game creation tools; no prior programming experience is required.

Prerequisite: Prerequisite or Corequisite: CSC 1019.

CSC 1029 - Introduction to Secure Coding (3)

Focuses on introduction to secure coding. Emphasizes concepts, principles, and best practices of structured secure programs within security standards. Analysis of design of secure programming is stressed, including costs, threats, security concepts, policies, coding flaws, vulnerabilities, exploits, and code mitigation. Analysis of the design of legacy and contemporary object oriented languages is emphasized. Focuses on the application of secure coding principles, standards to resolve code flaws and vulnerabilities.

Corequisite: CSC 1060.

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: Grade of C or higher in the following courses: CSC 1019 or MAT 2410.

CSC 1061 - Computer Sci 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: Grade of C or higher in the following course: CSC 1060.

CSC 1075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CSC 2000 - Game Programming I (3)

Introduces students to game programming techniques and how to use a game library. Skills developed in this class include programming input devices, 2D game theory and design, bitmap handling, sprite programming, and threads.

Prerequisite: Grade of C or higher in the following courses: CSC 1019 and CSC 1026.

CSC 2017 - Advanced Python Programming (3)

Continues program development and problem solving not covered in CSC1019: Introduction to Programming. Students will create larger programs in the areas of advanced expression, iterator objects, parsing, and GUI applications.

Prerequisite: Grade of C or higher in the following course: CSC 1019.

CSC 2020 - Intro to MS 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 - Computr 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: Grade of C or higher in the following course: CSC 1060.

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).

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: Grade of C or higher in the following course: CSC 1019.

CSC 2037 - Advanced C# Programming (4)

Focuses on advanced features of the C# programming language and .NET Framework by having students write complex Windows Applications. The relationships between C# and the .NET Platform and Framework are explored. Students will develop clear, properly structured, and well-documented C# programs that emphasize writing and utilize classes as abstract data types, collections, inheritance, and generics.

Prerequisite: Grade of C or higher in the following course: CSC 2036.

CSC 2040 - Java Programming (3)

Introduces the Java programming language and covers basic graphics, events/procedures, user interface, and libraries. Enables the student to write and execute a variety of Java programs. Incorporates Java Applets into HTML.

Prerequisite: Grade of C or higher in the following courses: CSC 1060 or CSC 2017.

CSC 2041 - Advanced Java Programming (3)

Continues the study of the Java programming language. Covers advanced programming topics including multi-threading, network/Internet programming, database programming, and JavaBeans. Enables the student to write advanced, large, and complex programs.

Prerequisite: Grade of C or higher in the following course: CSC 2040.

CSC 2045 - Secure Software Dev. (Lang.) (3)

Focuses on functionality when implementing security consequences with regard to formatted output and arithmetic operations in a program. The course introduces how to write a program that creates safe, reliable, and secure systems free from undefined program behaviors and exploitable vulnerabilities.

Prerequisite: Grade C or higher in the following courses: CSC 1029.

CSC 2046 - Mobile App Development :() (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: Grade C or higher in the following course: CSC 1060 or higher.

CSC 2075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CSC 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.

Prerequisite: Permission of instructor.

CSC 2085 - Independent Study (0)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

CSC 3000 - Advanced Computer Architecture (4)

Covers the analysis of advanced concepts in the applications of computer architecture and programming capabilities with keyboard and display controllers within programs. This course investigates the impact of exceptions and interrupts within a simulator, examines the hazards associated with a pipelined datapath, and uses the analysis of floating-point instructions.

Prerequisite: Grade of C or higher in the following courses: CSC 2025 and CSC 2045.

CSC 3020 - Software Engineering Fund. (4)

Focuses on the skills necessary to analyze, design, and implement software engineering projects. The course includes software engineering standards and processes, qualitative aspects including maintainability, extensibility, reusability, and robustness in every stage of the software-engineering life-cycle.

Prerequisite: Grade of C or higher in the following course: CSC 2045.

CSC 3022 - Security Fund. and Databases (4)

Examines the vulnerabilities of databases to attack. Functional requirements and security testing, focusing on the interaction between a software user and the application, are analyzed. This course will investigate database platforms and provide database developers with an understanding of database development best practices for optimum security.

Prerequisite: Grade of C or higher in the following courses: CSC 2045, CIS 2040, and CIS 2043.

CSC 3024 - Secure Code Vulnerabilities I (4)

Focuses on analyzing and implementing software vulnerabilities. This course explores vulnerabilities through code evaluation and implementation of language-specific solutions.

Prerequisite: Grade of C or higher in the following course: CSC 2045.
Corequisite: CSC 2045 can be taken with CSC 3024.

CSC 3026 - SecureScript:Operating Systems (3)

Focuses on analyzing and configuring an environment and assessing configuration variables in multiple operating systems. Topics include using multiple utilities in order to assimilate information on a network, host and data communications, and creating scripts for evaluation.

Prerequisite: Grade of C or higher in the following courses: CSC 1029, CIS 2020.

CSC 3028 - Security Libraries in Prog Lan (4)

Focuses on the issues surrounding security libraries within programming languages. This course analyzes static typing within a software program to assess integrity within a given programming library. The course will also explore what effect mutable resources have on security, along with encryption tools, and violation channels.

Prerequisite: Grade of C or higher in the following course: CSC 1029 or permission of instructor. Corequisite: CSC 129 can be taken with CSC 324.

CSC 4022 - Secure Software Engineering (4)

Focuses on the analysis and functionality of defective software and how to develop and implement secure software. The analysis performed by software engineers in order to detect, repair, and maintain safe systems will also be covered.

Prerequisite: CSC 2045.

CSC 4024 - Secur Code Vulnerabilities II (4)

Focuses on advanced implementation of software vulnerabilities. This course covers attack vectors frequently used by malicious actors such as email attachments, compromised "watering hole" websites, and other tools often relied on to take advantage of unpatched vulnerabilities found in widely-used software applications. Patching techniques will be deployed in order to repair vulnerabilities found in software components.

Prerequisite: CSC 3024.

CSC 4026 - Secure Cloud Programming (4)

Focuses on analyzing and implementing secure applications in the cloud. Topics covered will include designing and implementing applications via the cloud with a focus on security policies, analyzing computer models with recommendations to reduce the risks and security challenges surrounding programming, and data security within the cloud.

Prerequisite: CSC 2045.

CSC 4028 - Software Security Testing (4)

Focuses on testing software as it pertains to vulnerabilities within operating systems, libraries, and cloud applications. Topics covered include implementing testing environments through analytical assessments using tools that detect software inefficiencies and using reliable solutions in order to reduce security risks.

Prerequisite: CSC 2045.

CSC 4080 - Internship (4)

Provides an opportunity to apply the theoretical concepts and skills learned through their academic program with a practical experience in secure software development in the computer field. Interns will work with business and industry professionals to apply a wide variety of information related to the secure code industry.

Prerequisite: Permission of Instructor.

CUA-Culinary Arts Courses

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 of from the Education Foundation.

CUA 1005 - Food Serv Concepts/Mgmt Skill (3)

Demonstrates the use of management skills training in the food service industry by use of student interaction research, and also demonstrates the various styles of menu development. Includes basic responsibility for food service personnel in all kitchen positions with emphasis on advertising vs. publicity, job analysis, description specifications and duty list as related to recruiting and hiring process. Covers application, interview techniques, training, and hiring process. Incorporates preparation of menus for different styles of food service concept establishments.

CUA 1021 - Intro Food Pdn Prin/Practices (1)

Provides students with the fundamental principles of commercial kitchen operations including safety and sanitation applications, use and care of equipment, tools, utensils and knives, recipe use and conversion, organization of work, and basic cooking methods. The class meets a minimum of 22.5 hours.

CUA 1022 - Intro Stocks, Soups & Sauces (1)

Focuses on the fundamental principles of stocks, soups, sauces, gravies and thickening agents. Enables students to produce a variety of these products in the commercial kitchen incorporating practice in the use of tools, utensils, equipment and application of safety and sanitation practices. Students apply pre-preparation skills and efficient organization of work techniques. Meets a minimum of 22.5 hours.

CUA 1023 - Introduction to Garde Manger (1)

Provides fundamental principles of cold food and non-alcoholic beverage preparation and production in a commercial kitchen. Enables students to produce a variety of cold food and non-alcoholic beverage products incorporating practice in the use of tools, utensils, equipment and application of safety and sanitation methods. Introduces basic cold food decorative work such as fruit and vegetable garnishes and carvings, terrines, and hors d'oeuvres. Focuses on pre-preparation procedures and efficient organization of work techniques. Meets for a minimum of 22.5 hours.

CUA 1024 - Vege Prep & Breakfast Cookery (1)

Introduces students to vegetable preparation and breakfast cookery in a commercial kitchen. Focuses on the significance of variety of breakfast items and the preparation of vegetable items using a variety of cooking methods. Emphasizes the effects of seasonings and cooking methods on vegetable products. Students prepare, plate and garnish breakfast orders similar to those ordered in restaurants with egg cookery and dairy products emphasized. Meets a minimum of 22.5 hours.

CUA 1027 - Soups, Sauces, and Consommés (3)

Covers the preparation of the five mother sauces and small-derived sauces. Enables students to prepare stocks, consommés, emulsified sauces, clear soups, pureed soups, chowders, national, and cream soups in a commercial kitchen. Introduces gravies and sauce garnishing.

CUA 1031 - Starch/Pasta/Casserol/Grain (1)

Provides the basics of preparing and/or cooking potatoes, starches, legumes and pastas. Enables students to prepare and cook a variety of casseroles and grain products using a commercial kitchen for their preparation area. Allows students to apply pre-preparation skills and efficient organization of work techniques. Class meets a minimum of 22.5 hours.

CUA 1032 - Center of the Plate: Meat (1)

Provides the student with the basics of meat handling, including principles used for selecting meat products, their basic cuts and cooking methods. Focuses on a variety of meat products in a commercial kitchen. Meets for a minimum of 22.5 hours.

CUA 1033 - Ctr Plate Poultry/Fish/Seafd (1)

Provides the basics of handling poultry, fish and seafood including principles used for selection and the basic forms these products have and the methods of cooking them. Focuses on preparation of poultry, fish and seafood products in a commercial kitchen and incorporates practice in the use of these principles and methods. Covers pre-preparation skills and efficient organization of work techniques. Meets for a minimum of 22.5 hours.

CUA 1035 - Center Plate: Beef & Veal (1)

Provides the student with the basic information required for proper selection, handling, and cooking of beef and veal products. The course focuses on a variety of beef and veal products commonly used in the professional kitchen. Meets a minimum of 22.5 hours.

CUA 1041 - Baking: Principles/Ingredients (1)

Provides the student with the fundamentals of baking terminology, principles of baking, and the characteristics and functions of the main ingredients used in bakery production. Orients student to commercial equipment, tools, and utensils used in baking. Meets for a minimum of 22.5 hours.

CUA 1042 - BasicYeast-Raised Quick Breads (1)

Provides the student with the fundamentals of basic yeast-raised production and quick breads. Enables the student to produce white bread, rolls, variety grain breads, specialty breads, sweet yeast-raised products, and quick breads in a commercial kitchen. Meets for a minimum of 22.5 hours.

CUA 1043 - Baking:Cake/Pies/Pastry/Cookey (1)

Provides the student with the fundamentals of basic cake, pie, pastry, and cookie production. Enables the student to produce a variety of cakes, pies, pastries, cookies and assorted dessert items in a commercial kitchen. Meets for a minimum of 22.5 hours.

CUA 1044 - Baking Applications (1)

Serves as the practical vehicle for the student to apply basic baking principles and practices to the production of yeast breads, quick breads, cakes, icings, pastries, pies, and cookies. Focuses on the preparation of a variety of baked goods in a commercial kitchen according to a baking production schedule. Enables the student to demonstrate comprehensive knowledge of products as well as speed and efficiency in the production of quality baked goods. Meets a minimum of 22.5 hours.

CUA 1050 - Baking:Decorating/Presentation (3)

Examines the preparation and production of cakes, pastries, different styles of decorating, commercial equipment and types of products used for decoration. Covers the use of plate painting, national products, and designing show pieces.

CUA 1051 - Baking:Interm Bread Prep (3)

Focuses on preparation of types of bread products including French, rye, wheat, brioche, and croissants. Enables the student to demonstrate different styles of presentation including rolling, braiding, cloverleaf, parker-house, single knot, butter-flake, comb, and wreath shape. Examines production steps, ingredients, and commercial equipment that apply to course training.

CUA 1052 - Individual Fancy Dessert Pdn (3)

Focuses on the preparation and decoration of individual dessert items in a commercial kitchen. Covers the preparation of cream horns, napoleons, çlairs, cream puffs, marzipan fruits, marzipan sculptures, tarts, flambéed desserts, international desserts, pastry shells, pulled sugar, spun sugar, and individual chocolate decorations. Students research and locate dessert menus/recipes to be used in lab production.

CUA 1056 - Nutrition/ Hospitality Prof (3)

Provides students with the fundamentals of human nutrition. Focuses on the nutritional needs of humans throughout their life cycle as well as those with special dietary needs. Students may take a nationally recognized test from the Educational Foundation of the National Restaurant Association.

CUA 1057 - Menu Planning (3)

Introduces the student to planning menus and integrating them into foodservice operations. Equips the student with a working knowledge of the function, mechanics, and results achieved by the menu. Provides an overview of the existing and growing foodservice industry as seen through the menu.

CUA 1080 - 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.

CUA 1082 - 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.

CUA 2010 - Advanced Cuisine and Garde Manger (4)

Focuses on the preparation of food display items for buffets and banquets such as fancy garnishes, fruit and vegetable carvings, canapés, party trays, etc. Includes pates, galantines, terrines, and choud froid items. Incorporates creation of food artistry show pieces meeting competition guidelines developed by the American Culinary Federation. Covers the preparation of a regional, ethnic or cultural culinary presentation based upon personal research.

CUA 2042 - Intermediate Garde Manger (1)

Teaches students the basic skills necessary for preparing a variety of popular charcuterie items. This advanced course begins with an introduction to ingredients and their application as students learn to prepare a variety of forcemeats. Students go on to learn the preparation of pates, galantines, terrines, and sausages. Preparation and the use of aspic and chaud-froid as covered.

CUA 2055 - Supervis/Hospitality Industry (3)

Provides the current/future foodservice operator, manager, or supervisor with a solid foundation for developing communication skills, planning and decision-making skills, and skills for creating a goal-oriented environment utilizing management principles in the selection, training, evaluating, delegating, motivating, rewarding, and disciplining employees. Stresses skills for success through people development.

CUA 2061 - Cost Controls (3)

Provides students with the opportunity to learn the types of costs usually found in the food service industry. Students will learn to apply control techniques to a variety of costs and sales. They will also learn to interpret a variety of financial reports which reflect the relationship between costs and income. Students may take the national Cost Controls test from the National Restaurant Association Education Foundation. If they pass the test with 75% or higher, they will receive a national certificate for the course.

CUA 2078 - Seminar (2)

Provides students with an experiential learning opportunity.

CUA 2081 - Internship (4)

Places students in an actual work situation where they participate in the operation of a foodservice establishment. Hours of work are arranged by the site supervisor and the intern. The number of hours required are determined by the number of credits the course carries.

CWB-Computer Web-Based Courses

CWB 1010 - Intro to Web Authoring (3)

Explores the complete set of web authoring skills using HTML and/or other scripting languages. This course includes links, backgrounds, controlling text and graphic placement, tables, image maps, frames and forms.

Prerequisite: Computer basics and literacy (file management, Windows, and internet navigation).

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.

Prerequisite: Computer basics and literacy (file management, Windows, and internet navigation).

CWB 2005 - Client-side Scripting: (Soft) (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 one programming language (CSC 1060 or higher).

CWB 2008 - Web App Dev: (Dev Tool(s)) (3)

Teaches students how to work in the server-side scripting environment. Students learn the basics of application development, and general principles that apply to most development environments. Students develop applications using two different server-side application development tools: PHP Hypertext Preprocessor (PHP), and Cold Fusion. Students also learn key application standards such as source and revision control, coding standards, code optimization and data integrity.

Prerequisite: Grade of C or higher in the following courses: CWB 1010 and CSC 1019.

CWB 2009 - Web Content Management Syst (3)

Explores the use of open source Content Management Systems to simplify the creation and maintenance of web sites.

Prerequisite: Grade of C or higher in the following course: CWB 1010.

CWB 2075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CWB 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.

Prerequisite: Permission of instructor.

CWB 2089 - Capstone (0)

A demonstrated culmination of learning within a given program of study.

DAN-Dance Courses

DAN 1005 - Hip Hop Dance I (1)

Consist of basic concepts and skill of hip hop dance. Focuses on warm-up exercises, street dance footwork, ground moves, isolations and freezes. Explores hip hop dance as a high energy expression of hip hop culture. Students will learn combinations leading to hip-hop dance routines.

DAN 1006 - Hip Hop Dance II (1)

Continues Hip Hop I with an increased knowledge of Hip Hop dance. This course consists of more advanced and challenging footwork, techniques and combinations as they apply to this genre. Emphasis will be placed on increased technical skills.

Prerequisite: Grade of C or higher in the following course: DAN 1005 or permission of instructor.

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 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.

Prerequisite: Grade of C or higher in the following course: DAN 1021 or permission of instructor.

DAN 1025 - Dance Appreciation: AH1 (3)

Introduces and allows discovery, experience, analyzation, and evaluation of different genres of dance, including but not limited to, music, choreography, costuming, history, and culture. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

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 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 1033 - Ballet III (2)

Builds on Ballet II at an intermediate/advanced level. Continues learning within the basic structure of a ballet class while increasing the level of skills through more experience with challenging movement combinations.

DAN 1034 - Ballet IV (2)

Consists of traditional and contemporary ballet technique with focus on correct body alignment and kinesiology for an increased physical performance. This is not a pointe 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 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 1044 - Tap II (1)

Continues with the concepts introduced in Tap I including more advanced versions of time steps, drawbacks, and bomber shays. Introduces wings and syncopated pull-backs. Focuses on intricate rhythm patterns.

Prerequisite: Grade of C or higher in the following course: DAN 1043 or permission of instructor.

DAN 1050 - Dance History: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

DAN 1075 - Special Topics (1-3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

DAN 2011 - Dance Composition & Improv I (3)

Focuses on principles of choreography and development of individual expressive style.

DAN 2014 - Dance Anatomy (3)

Introduces the principles of anatomy and their application to dance technique, with emphasis on muscles, bones, and joints involved in movements specific to dance. Basic nutrition and dance wellness are also covered. Students apply course information to improve dance technique and increase movement efficiency.

DAN 2015 - Dance Kinesiology (3)

Develops additional knowledge of the human muscular and skeletal systems in connection to dance training with special attention given to misalignments. This course emphasizes prevention and treatment of dance injuries and applies this information to dance instruction. Students design dance conditioning programs that address individual differences and needs.

DAN 2021 - Dance Performance I (2)

Includes the ability to rehearse and perform original choreography for performance after selection through audition. Expands and deepens understanding of a professional company atmosphere while focusing on technique. Improvisation may be included. This course may be repeated up to two times for credit.

DAN 2022 - Dance Performance II (2)

Includes the ability to rehearse and perform original choreography at an advanced level for performance after selection through audition. Expands and deepens understanding of a professional company atmosphere while focusing on advancing technique and utilizing improvisation in performance. This course may be repeated up to two times for credit.

DAN 2024 - Dance for Musical Theatre I (3)

Introduces students to dance within the context of musical theatre. Enables the student to practice non-verbal communication and expressive movement techniques.

DAN 2026 - Pointe (1)

Emphasizes elementary pointe technique. Most work will be done at the barre stressing the muscular development of the foot, which is necessary before more advanced work can be undertaken.

DAN 2027 - Pointe II (1)

Offers a continuation of DAN 2026 Pointe I, with emphasis on barre work to strengthen the foot and ankle. Students will gain knowledge and skill leading to the intermediate level.

DAN 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.

DAT-Data Science**DAT 1001 - Intro to Data Science (3)**

Provides a foundational overview of data science and develops the knowledge required to make data-driven decisions to address real-world problems. The course introduces the how to collecting data from different sources, use of statistics to draw conclusions about a given data set, use of technology to visualize data and some of the challenges associated with storing, manipulating, analyzing and securing data. Computational tools are used as a component of the course.

DAT 2001 - Calculus Based Statistics and Modeling (3)

Introduces probability and statistics with an emphasis on computation, large data sets, and applications for engineering and data science careers. This course covers descriptive statistics, inferential methods, basic probability, predictive modeling, risk assessment, and methods of regression.

DAT 2002 - Visualizing Data (3)

Focuses on the analysis and design of visual representations of statistical information. The analysis and evaluation of existing graphics are combined with principles from disciplines such as statistics, computer science, and graphic design to define the criteria for a quality visualization. Various software tools are used to develop static and interactive visualizations to identify patterns, convey messages, make decisions, and tell stories with data.

DAT 2025 - Intro to Machine Learning (3)

Provides the foundation for students to explore, practice, and apply mathematical concepts for pattern recognition, neural networks, and machine learning. The course covers algorithmic and mathematical methods which are required for machine learning techniques, as well as the theoretical relationships between these algorithms. Coding may be required as the course provides practice with translating the above mathematical concepts into computer programs.

DEA-Dental Assisting Courses**DEA 1001 - Dental Terminology (1)**

Includes colloquial versus professional terminology, word elements and structure as they apply to dental terminology.

DEA 1011 - Intro 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.

DEA 1012 - Dental Science I (3)

Includes fundamentals of the oral structures as they apply oral histology, embryology, morphology, pathology, dental anatomy, and dental charting.

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.

DEA 1015 - Infection Control (3)

Includes basic information concerning infection and disease transmission in the dental office. Emphasizes knowledge of microorganisms, with an emphasis on aseptic techniques, sterilization, and hazardous communication management.

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.

DEA 1021 - Principles/Clinical Practice (3)

Includes techniques used in four handed dentistry, instrument identification, and armamentarium for tray set-ups. Covers sterilization and aseptic procedures.

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.

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.

DEA 1024 - Dental Radiography (3)

Focuses on the science of radiography, the application of radiographic techniques, and aseptic techniques.

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.

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 eighteen years of age.

DEA 1075 - Special Topics (1-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

DEA 1076 - Special Topics (1-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

DEA 1080 - Clinical Internship (3)

Includes the opportunity for clinical application of dental assisting techniques in a dental office or clinical setting as part of the American Dental Association's requirement of 300 clinical internship hours.

DEA 1081 - Internship I: Dental (0.25-6)

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).

DEA 1082 - Internship II: Dental (1)

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).

DEA 2075 - Special Topics (1-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

DEA 2076 - Special Topics (1-12)

Provides students with a vehicle to pursue special topics of interest in business. The content of this course is designed on an as needed basis to provide current, up-to-date information.

DEA 2087 - Cooperative Education (2)

Meets the individual needs of students engaged in intensive cooperative education under the direction of a qualified instructor.

DMS-Diagnostic Medical Sonography Courses

Students must be accepted into the Sonography Program prior to taking any DMS courses other than DMS 1001 or RTE 2055. Please visit the Sonography website for information regarding application and admission process.

DMS 1001 - Introduction to Sonography (2)

Provides an overview of sonography for students interested in the Diagnostic Medical Sonography program with an introduction to pulse-echo imaging, general sonography, cardiac sonography, vascular technology and typical career opportunities.

Prerequisite: Grade of C or higher in the following courses: CCR 092 or CCR 094 or equivalent placement scores.

DMS 2001 - Ultrasound Physics I (2)

Presents the theoretical and practical approach to understanding the fundamentals of ultrasound physics, instrumentation, image characteristics, artifacts, and bio-effects. The ergonomics of proper scanning techniques (setting up the cart, chair, and room properly to avoid musculoskeletal injury) will also be presented.

DMS 2002 - Ultrasound Physics II (2)

Covers a detailed study of ultrasound physics and the application within the clinical setting. Manipulation of technique controls, basic mathematical concepts, various Doppler modalities, equipment artifacts, QC/QA procedures, 3D fundamentals, and bio effects are covered.

~Note: The comprehensive final is in a registry review format.

DMS 2070 - Clinical Observation (3)

Continues to build upon the principles that are expected to be understood by students in the Diagnostic Medical Sonography (DMS) discipline.

DMS 2071 - Clinical I (6)

Continues to build upon the principles that are expected to be understood by students in the Diagnostic Medical Sonography (DMS) discipline.

DMS 2072 - Clinical II (6)

Continues to build upon the principles that are expected to be understood by students in the Diagnostic Medical Sonography (DMS) discipline.

DMS 2073 - Clinical III (6)

Continues to build upon the principles that are expected to be understood by students in the Diagnostic Medical Sonography (DMS) discipline.

DMS 2074 - Clinical IV (6)

Continues to build upon the principles that are expected to be understood by students in the Diagnostic Medical Sonography (DMS) discipline.

DMS 2082 - Ultrasound Internship II (10)

Offers continued clinical experience for the ultrasound student. Application of the small parts didactic lectures will be applied and will include image evaluation and cross-sectional anatomy of the thyroid, breast and scrotum. The foundations of vascular anatomy, instrumentation, scanning techniques and image evaluation will be stressed. The student will spend 30 hours per week at the clinical site under the direct supervision of a registered sonographer.

DMS 2083 - Ultrasound Internship III (10)

Continues clinical experience for the ultrasound student. Application of the topics covered in advanced didactic lectures to include an introduction to invasive procedures using ultrasound guidance. Sterile technique and standard precautions will be reviewed. The student will spend 30 hours per week at the clinical site under the direct supervision of a registered sonographer.

DMS 2085 - Independent Study (1)

Meets the individual needs of students. Students engage in intensive study or research in the field of medical ultrasound (sonography) under the direction of a qualified instructor.

DMS 2088 - Practicum (6)

Continues to build upon the principles that are expected to be understood by students in the Diagnostic Medical Sonography (DMS) discipline.

DMS 2100 - Small Parts Ultrasound (2)

Designed to teach specific knowledge of anatomy of the breast, thyroid, scrotum, prostate and the surrounding structures. The ability to identify pathology or to locate abnormalities is also an intricate part of the class.

DMS 2101 - Abdominal Ultrasound I (2)

Offers a systematic study of the abdomen to include the function and development of the major organ systems with correlation to sonographic imaging and the surrounding environment. The student will master the foundations of sectional anatomy and abdominal sonography.

DMS 2102 - Abdominal Ultrasound II (2)

Offers a systematic study of the gastrointestinal tract, pediatric abdomen, neonatal brain, and transplanted organs. The student will review the necessary sterile technique preceding invasive and intraoperative procedures and will learn the applications of contrast agents in ultrasound. Other imaging techniques will be discussed as well as the principles guiding the field of sonography. A mock registry examination will be administered to prepare the student for writing the national registry examination.

DMS 2111 - General Ultrasound Scan Lab (3)

Prepares the general sonography student for an ultrasound internship with an emphasis on abdominal, superficial structure, gynecological and obstetrical scanning. Ergonomics, applied instrumentation, image optimization, and history integration will be covered as well.

DMS 2201 - OB/GYN Ultrasound I (2)

Provides a systematic study of embryology to include development of the major organ systems, with correlation to sonographic imaging, at all stages of embryonic/fetal development and the surrounding environment and the ultimate mastery of the foundations of obstetric and gynecological sonography.

DMS 2202 - OB/GYN Ultrasound II (2)

Provides a systematic study of embryology to include development of the major organ systems, with correlation to sonographic imaging, at all stages of embryonic/fetal development and the surrounding environment and the ultimate mastery of the foundations of obstetric and gynecological sonography.

DMS 2400 - Vascular Ultrasound (2)

Covers basic positioning and scanning protocol of the vascular system. Review of the anatomy, hemodynamics and terminology unique to the vascular system with emphasis on the external carotid system, the upper and lower venous and arterial systems and the abdominal vasculature will be included.

DMS 2401 - Abdominal Vascular Sonography (2)

Teaches students how to perform duplex exams of the renal, mesenteric, aorta and iliac arteries as well as the inferior vena cava, iliac, hepatic and portal veins. The student will identify risk factors and describe pathogenic mechanisms of these vessels. Surgical and interventional techniques will be discussed. Post interventional ultrasonic evaluation of these procedures will also be discussed and demonstrated. Correlation with other diagnostic procedures will be demonstrated.

DMS 2402 - Vascular Extremities (2)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

DMS 2403 - Cerebrovascular Sonography (2)

Provides an in-depth study of the cerebrovascular system and cerebrovascular disease. The student will learn how to perform a complete B-mode and Doppler ultrasonic examination using all current industry standards. Transcranial Doppler techniques will also be presented. Pathological development and pathophysiology will be described. This course will also review techniques for patient assessment, obtaining patient histories, evaluating and correlating patient symptoms with diagnostic findings. Surgical and non-surgical corrective techniques will be discussed. The student will be introduced to correlating ultrasound test results with angiography, computed tomography, nuclear medicine vascular procedures and magnetic resonance imaging.

DMS 2405 - Venous Sonography (2)

Provides the student with an in-depth study of the evaluation of peripheral venous disease using duplex ultrasound and plethysmographic techniques. The student will learn to evaluate for venous thrombosis and insufficiency. Superficial venous mapping will be demonstrated. The student will review techniques for evaluating the presence of venous disease. The student will learn pathological mechanism and risk factors for venous disease. Surgical and non-surgical corrective procedures will be discussed. Correlation with other vascular procedures will be demonstrated.

DMS 2406 - Arterial Sonography (2)

Provides an in-depth study of peripheral arterial disease and non-invasive evaluation of it. The student will learn how to perform B-mode and Doppler evaluation of the upper and lower extremities. The student will also learn how to perform pulsed volume recording, segmental blood pressures and plethysmography. Pathological and pathophysiologic states will be described. The course will review pertinent techniques for patient assessment, obtaining patient histories, evaluating and correlating patient symptoms with diagnostic findings. The student will be introduced to correlating information with other diagnostic procedures. Surgical and non-surgical corrective techniques will be discussed. Techniques for evaluating post interventions or surgical techniques will also be explained.

DMS 2411 - Vascular Ultrasound Scan Lab (3)

Prepares the vascular sonography student for an ultrasound internship with an emphasis on arterial and venous scanning. Ergonomics, applied instrumentation, image optimization, and history for vascular scans integration will be covered as well.

DMS 2501 - Normal AdultEcho (3)

Introduces normal adult echocardiography with an emphasis on echocardiographic anatomy, physiology, and scanning techniques. This course also explores American Society of Echocardiography (ASE) guidelines including emphasis in 2-D, M-mode, Doppler, stress, contrast, and transesophageal imaging. Other topics include electrocardiography (ECG) and pharmacology common to echocardiography.

DMS 2502 - Adult Echo Pathology (3)

Comprehensively covers echocardiographic pathology to include valvular, systemic, structural, functional and ischemic diseases. Common congenital anomalies as well as pathology of the great vessels are covered.

Prerequisite: DMS 257. Students must have taken DMS 257 or be enrolled in DMS 257 prior to enrolling into DMS 267.

DMS 2503 - Adult Echo Pathology II (2)

Expands echocardiographic pathology to include valvular masses, valve repairs and prostheses, cardiac tumors and masses, lesser common cardiac disease states, common congenital anomalies that survive into adulthood, cardiac assist devices, and cardiac transplantation. The course includes further review of echocardiographic enhancing agents and 3-dimensional (3D) cardiac ultrasound.

DMS 2511 - Adult Echo Scan Lab (3)

Introduces cardiac ultrasound scanning techniques. The course covers ergonomics, applied instrumentation, image optimization, and patient history for cardiac integration.

DMS 2512 - Adult Echo Scan Lab II (6)

Introduces cardiac ultrasound scanning techniques. The course covers ergonomics, applied instrumentation, image optimization, and patient history for cardiac integration.

ECE-Early Childhood Education Courses

ECE 1011 - Intro 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

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: Grade of C or higher in the following courses: ECE 1011 and CCR 0092 or CCR 0094 or equivalent placement scores.

ECE 1111 - Infant/Toddler Theory/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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

ECE 1125 - Intro 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: Grade of C or higher in the following courses: ECE 1011 and CCR 0092 or CCR 0094 or equivalent placement scores.

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: Grade of C or higher in the following course: ECE 1011.

ECE 1271 - Music/Movement for Children (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: Grade of C or higher in the following course: ECE 1011.

ECE 2051 - ECE Nutrition/Health/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: Grade of C or higher in the following courses: ECE 1011 and CCR 0092 or CCR 0094 or equivalent placement scores.

ECE 2076 - Special Topics (0)

Explores current topics, issues and activities related to one or more aspects of the early childhood profession.

ECE 2080 - Internship (1-12)

Focuses on work experience in a licensed early childhood care and education program. (45 contact hours per credit hour).

ECE 2088 - Practicum:Early Childhood Ed (3)

Provides students with advanced field experience opportunities in early childhood education programs.

Prerequisite: Grade of C or higher in the following courses: CCR 092 or CCR 094 or equivalent placement scores.

ECE 2101 - Working w/Families & Communs (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: Grade of C or higher in the following courses: ECE 1011 and CCR 0092 or CCR 0094 or equivalent placement scores.

ECE 2301 - Obs. and Assess. in ECE (2)

Focuses on the use of developmentally appropriate observation and assessment strategies to document child development, play, and learning to support families and professionals in promoting children's success; and to document quality indicators in early childhood programs. A variety of formal and authentic assessment methods are explored in this course. This course addresses children ages birth to eight years.

Prerequisite: Grade of C or higher in the following courses: ECE 1011, CCR 0092, CCR 0094.

ECE 2315 - EC Obs. and Assess. Techniques (1)

Includes a supervised placement in a licensed early childhood setting. Formal and authentic assessment methods are explored within supervised placement in early care and education settings. This course provides opportunities for practicing developmentally appropriate observation and assessment techniques to document child development, play, and learning in order to support families and professionals in promoting children's success. Program evaluation assessment tools are covered. This course addresses children ages birth to eight years.

Prerequisite: Grade of C or higher in the following courses: ECE 1011, CCR 0092, CCR 0094.

ECE 2381 - ECE Child Growth & 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: Grade of C or higher in the following courses: ECE 1011 and CCR 0092 or CCR 0094 or equivalent placement scores.

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: Grade of C or higher in the following courses: ECE 1011 and CCR 0092 or CCR 0094 or equivalent placement scores.

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: Grade of C or higher in the following courses: ECE 1011 and CCR 0092 or CCR 0094 or equivalent placement scores.

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: Grade of C or higher in the following courses: ECE 1011, CCR 0092, CCR 0094 and ECE 2381, PSY 2441.

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: Grade of C or higher in the following courses: ECE 1011, ECE 2381 or PSY 2441, and CCR 0092 or CCR 0094 or equivalent placement scores.

ECE 2631 - Language & Cognition (3)

Examines theories of cognitive and language development as a framework for conceptualizing the way children acquire thinking skills. Includes observing, planning, facilitating, creative representation, and evaluating strategies within the context of play. Focuses on language, science, math, problem solving and logical thinking. Addresses ages birth through age 8.

Prerequisite: Grade of C or higher in the following courses: ECE 1011 and CCR 0092 or CCR 0094 or equivalent placement scores.

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: Grade of C or higher in the following courses: ECE 1011 and CCR 0092 or CCR 0094 or equivalent placement scores.

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, ages birth to 8 years. 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: Grade of C or higher in the following courses: ECE 1011, CCR 0092, CCR 0094 and ECE 2381, PSY 2441.

ECE 2661 - Science/Math & 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/mathematical activities for young children.

Prerequisite: Grade of C or higher in the following course: ECE 1011.

ECO-Economics Courses**ECO 1001 - Econ Of Social Issues:SS1 (3)**

Examines the major socio-economic issues of the past century. Covers poverty and growth, education, health care, pollution and discrimination. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

ECO 2001 - Prin of Macroeconomics: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores. MAT 1340 or equivalent placement scores are suggested.

ECO 2002 - Prin of Microeconomics: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores. MAT 1340 or equivalent placement scores are suggested.

ECO 2045 - Environmental Economics:SS1 (3)

Introduces students to contemporary environmental issues and policies meant to reduce environmental degradation. Includes market failures, analytical tools, government pollution reduction policies for air, water, and natural environments and their effectiveness. This is a statewide Guaranteed Transfer course in the GT-SS1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores. MAT 1340 or equivalent placement scores are suggested.

EDU-Education Courses**EDU 2055 - Outdoor Education Leadership (3)**

Provides opportunities to explore teaching as a career choice in an outdoor setting. Topics covered from an outdoor educational perspective will include current educational issues, social trends, experiential learning. Students will explore multiple communication tools, as well as form and maintain relationships with the outdoor education staff, elementary school students, high school leaders, and visitors to an outdoor laboratory school, such as the Jefferson County outdoor laboratory school. Students will teach hands-on lessons, based on the Colorado Content Standards, with an emphasis on science, history, and environmental education.

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 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.

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 2251 - Intro to RB Mentoring (3)

Covers the concepts and philosophy of mentoring new teachers in early childhood or K-12 educational settings. The course introduces the skills of a mentoring educator to cultivate and engage other adults in sustained and focused learning. This course is recommended for any individual serving as a peer mentor in an early childhood, elementary, or secondary classroom setting. This course has a required co-requisite of EDU 2255 course. Students must register for both courses.

EDU 2255 - Intro to RB Mentoring Tech (1)

Provides opportunities for the mentor teacher to practice beginning-level competencies in mentoring in early childhood or K - 12. This course emphasizes practice of behaviors and actions that demonstrate knowledge, comprehension, or application of mentoring strategies. This is a practicum-based course. This course is recommended for any individual serving as a peer mentor in an early childhood, elementary, or secondary classroom setting. This course has a required co-requisite EDU 2251 course. Students must register for both courses.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores. Corequisite: EDU 2251.

EDU 2341 - Multicultural Education (3)

Focuses on the need to recognize and understand the similarities and differences among people and develop a respect for all individuals and groups. Assists teachers to recognize the special learning needs of children from different racial, ethnic, cultural and socioeconomic groups and to encourage teachers to integrate multicultural/diversity teaching into the school curriculum.

EDU 2401 - Teaching Exceptional Learners (3)

Focuses on the individual differences and modifications that are necessary in the educational practices of the exceptional learner. Incorporates an additional 10-hour 0-credit, pre-professional, supervised, field based experience. Together with this experience, a portfolio and field experience reflective journal is required of all students.

Prerequisite: Grade of C or higher in the following courses: ECE 2381 or PSY 2441 or permission of instructor.

EDU 2611 - Teaching, Learning & 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.

EGG-Engineering Courses**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 1030 - Robotics Design (1)

Focuses on the process of building an autonomous robot from the initial design to final evaluation. Includes design and building of the mechanical structure, electrical system as well as programming and integration of all systems to produce a fully functional autonomous robot capable of performing a series of proscribed tasks. Culminates with a detailed evaluation of both the robot and its performance.

EGG 1051 - Experimental Design (2)

Introduces the student to the design and construction of scientific and engineering experiments. Includes the entire life cycle of the experiment, from design, to construction, to analysis of data and communication of final results.

EGG 2011 - Engr Mechanics I - Statics (3)

Focuses on the vector and calculus treatment of forces and force systems. Covers concurrent and nonconcurrent force systems. Includes calculating moments of friction, trusses, centroids and moments of inertia.

Prerequisite: Grade of C or higher in the following courses: PHY 1111 or PHY 2111.

EGG 2012 - Engineering Mech II (Dynamics) (3)

Focuses on vector and calculus treatment of the dynamics of particles and rigid bodies using Newton's Laws. Includes work-energy impulse momentum, and free and forced oscillations.

Prerequisite: Grade of C or higher in the following course: EGG 2011.

EGG 2020 - Thermodynamics (3)

Explores fundamental concepts and basic theory, including first and second laws of thermodynamics, properties, states, thermodynamic functions, cycles, mixtures, and chemical and phase equilibrium.

EGG 2041 - Circuit Analysis I (4)

Covers the basic theorems of circuit analysis. Transient solution of circuits by classical techniques. Steady-state sinusoidal solutions by means of phasors will be introduced. Basic electrical circuit measurements and experimentation using oscilloscopes, various meters and function generators will be performed in the lab.

EGT-Engineering Graphics Tech Courses

See CAD (p. 159) for more listings.

EGT 1110 - Intro Design/Engineering Apps (3)

Provides students with opportunities to engage with an industry client on a real-world, open-ended engineering design problem. Students will develop professional skills and knowledge using Computer Aided Drafting (CAD) as a primary tool. The course covers human-centered design and the role of engineering in a sustainable society. Students will cultivate an understanding of the differences in engineering disciplines while working in interdisciplinary teams. Written and verbal communication skills will also be covered.

Prerequisite: Grade of C or higher in the following course: MAT 1340 or higher level math.

EGT 2075 - Special Topics (6)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

EGT 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.

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 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.

EGT 2303 - Applied Dimension & Tolerance (3)

Focuses on industrial dimensioning practices, enables the student to develop skills in dimensioning techniques and learn to apply the ASME Y14.5 dimensioning standard.

EIC-Electricity Ind/Commercial Courses

EIC 1000 - Electrical Const & Planning (4)

Introduces the planning of electrical system installations from blueprints to the completed job, preparation of material lists, job sheets and time schedules for various phases of construction. Emphasizes the National Electrical Code.

EIC 1001 - Electrical Print Reading (4)

Teaches the skills needed to interpret electrical drawings properly. This 15 hour seminar is critical for anyone involved in the design, construction, or maintenance of electrical systems.

EIC 1002 - Electrical Principles and Appl (3)

Provide the fundamental principles that are involved with all electrical calculations and operations as well as practical applications of various concepts.

EIC 1103 - Electrical Safety Requirements (1)

Focuses on training that is 100% practical and deals with every important aspect of OSHA's electrical safety-related work practices and how they apply. Teaches the safe installation and maintenance of electrical equipment. Covers the use of personal protective equipment.

EIC 1201 - Basics of AC & DC Electricity (4)

Focuses on resistance, current, voltage and power in AC and DC circuits; measurements; computations of series and parallel circuits; circuit analysis and troubleshooting with basic test equipment.

EIC 1202 - DC Circuit Fundamentals (4)

Covers the principles of DC electricity and magnetism with emphasis on Ohm's, Kirchoff's and Watt's laws to analyze circuits voltage current and power. Addresses common measuring instruments and safety.

EIC 1203 - AC Circuit Fundamentals (4)

Covers the principles of AC electricity, magnetism, inductive and capacitive circuits; use of phasors to represent AC quantities; the concept of reactive volt-amperes and power factor; and use of instruments, including VOM's and oscilloscopes. Explores the principles of polyphase alternating current systems, Wye and Delta circuit configurations, and safety procedures.

Prerequisite: Grade of C or higher in the following course: EIC 1202 or permission of instructor.

EIC 1211 - Electrical Installations I (4)

Covers residential building wiring in conformance with the current National Electrical Code and local codes using nonmetallic cable. Emphasizes proper use of tools and safety.

EIC 1212 - Electrical Installations II (4)

Explores commercial and industrial building wiring in conformance with the current National Electrical Code and local codes using electric metallic tubing and other raceways. The emphasis is on proper use of tools and safety.

Prerequisite: Grade of C or higher in the following course: EIC 1211 or permission of instructor.

EIC 1220 - Electric Motors (1.5)

Teaches the basic operational theory to the actual operation of various types of AC and DC motors in an interactive environment that encourages participant interaction, as well as Hands-On lab exercises. All phases of this course are taught in simple and easy-to-understand terms. This course is presented using the latest technological equipment.

EIC 1233 - Grounding and Bonding (1.5)

Prepares the student in the latest technology and techniques available for code and standards-compliant grounding and bonding systems. Focuses on grounding and bonding requirements as they relate to Article 250 and other articles of the NEC. Covers installation, testing and inspection procedures for II power systems. Includes rules to minimize the risk of electricity as a source of electric shock, and as an ignition source for fires.

EIC 1260 - Instruments & Measurements (4)

Covers the proper techniques for using electrical instruments, including volt/ohm, amp, phase rotation, oscilloscopes and recording meters. Focuses on instrument transformers for journeymen and in-plant electricians.

Prerequisite: Grade of C or higher in the following course: EIC 1202 or permission of instructor.

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: Grade of C or higher in the following course: EIC 1202 and EIC 1203 or permission of instructor.

EIC 1270 - Electrical Maintenance (4)

Introduces students to common electrical repairs, electrical systems, tools and test equipment. Includes replacing or repairing devices such as receptacles, light fixtures and ballasts, circuit breakers, fuses and switches. Addresses electrical safety and code applications.

EIC 1272 - Electrical Code Calculations (4)

Discusses calculations used in the application of the National Electrical Code. Emphasizes sizing of branch circuit and feeder conductors and calculating ratings of protective devices.

EIC 1850 - Wiring Methods (1)

Expands and reinforces the electrician's knowledge of wiring methods as stated in Article 300 and other articles of the National Electrical Code (NEC). Emphasis is placed on proficient use of the NEC to promote interpretation and application of the provisions of the code. This class meets necessary state licensing renewal requirements for professional development in wiring methods.

EIC 1851 - Grounding and Bonding (1)

Expands and reinforces the electrician's knowledge of the requirements for grounding and bonding as stated in Article 250 and other articles of the National Electrical Code (NEC). Emphasis is placed on proficient use of the NEC to interpret and apply the provisions of the code. This class meets necessary state licensing renewal requirements for professional development in grounding and bonding methods.

EIC 1852 - Theory and Calculations in NEC (1)

Expands and reinforces the electrician's knowledge of theory and calculations required in the electrical industry. Emphasis is placed on the different mathematical formulas in determining ampacity. The course provides opportunities to develop correct values based on tables in the National Electrical Code (NEC). This class meets necessary state licensing renewal requirements for professional development in theory and calculation methods.

EIC 1853 - NEC Code Changes (1)

Expands and reinforces the electrician's knowledge of the National Electrical Code (NEC). Emphasis is placed on the code changes for the current edition of the NEC. The electrician reviews tables and chapters of the NEC for better comprehension and interpretation of the provisions and applications of the code. This class meets necessary state licensing renewal requirements for professional development in licensing renewal.

EIC 1860 - National Electrical Code I (4)

Focuses on the National Electrical Code and local code requirements for electrical installation. Covers chapters one through four of the National Electrical Code.

EIC 1861 - National Electrical Code II (4)

Builds on course EIC 1860 and covers chapters five through nine of the National Electrical Code, including hazardous locations, special occupancies, conditions and equipment.

EIC 2029 - AC & DC Variable Speed Drive (1.5)

Teaches variable speed drive technology that offers a cost effective method to match driver speed to load demands and represents a state-of-the-art opportunity to reduce operating costs and improve overall productivity. Focuses on variable speed drive technology including operation, set-up, troubleshooting, maintenance, proper selection and application for drives and basic drive overview and comparison.

EIC 2061 - Project Management: Electrical (4)

Focuses on electrical projects in the construction industry. This class teaches the skills necessary for goal setting, project planning, project scheduling, and motivating the work force. It introduces leadership techniques for improving jobsite relations for today's diversified labor force. Students review and analyze industry standards for compliance in production reporting and daily documentation for contract preparation.

EIC 2075 - Special Topics (0.5-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

EIC 2080 - 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.

Prerequisite: Permission of instructor.

EIC 2082 - Internship (0.5-12)

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

Prerequisite: Permission of instructor.

EIC 2085 - Independent Study (0.5-12)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: Permission of instructor.

EIC 2320 - Industrial Electrical Controls (4)

Studies the application of electrical and electromechanical sensing/control devices; heating, ventilating and air conditioning applications; motor control, conveyor drives and other industrial applications. Students design control systems to meet assigned conditions, use principles of relay logic to prepare correct ladder diagrams and wire up, test and trouble-shoot their systems in the laboratory. The course stresses accuracy, safety and National Electric Code requirements.

EIC 2322 - Instrument & Process Control I (4)

Investigates theory of industrial instrumentation measurement through process control. Includes theory and measurement methods for temperature, pressure, level and flow. Incorporates hands-on training equipment to measure temperature and pressure and perform calibration of a pressure differential transmitter. Enables the student to construct a closed loop and tune the loop. Test equipment is used to simulate a two-wire transmitter and source a current signal for calibration of an I/P transducer.

EIC 2323 - Advanced Industrial Controls (4)

Builds on the student's previous knowledge and understanding of electrical, including installation, maintenance and modification of motor control. This class provides students with the knowledge and skill set levels in reading relay ladder logic diagrams and in the layout, mounting and terminating of equipment in control panels used in industry. The program builds a basic foundation in electrical theory, the operating characteristics of electrical controls and the connection and troubleshooting of control circuits.

Prerequisite: Grade of C or higher in the following course: EIC 2320 or permission of instructor.

EIC 2325 - Programmable Controllers (4)

Studies the use of solid-state control equipment, primarily the programmable controller and associated solid-state sensors to control equipment, machinery or complete processes. Includes concepts of solid-state logic, characteristics of solid-state sensors; conversions of relay logic control systems to programmable control systems; and microprocessor-based systems and remote control of processes. Enables the student to design, implement and test control systems in the laboratory to meet specifically-assigned control problems. Emphasizes accuracy, safety and National Electrical Code requirements.

Prerequisite: Grade of C or higher in the following course: EIC 1202 and EIC 2320 or permission of instructor.

EIC 2326 - PLC Controllers Advanced (4)

Studies the advanced uses and applications of programmable logic controllers toward automated equipment, machines and processes. Includes understanding the functions of PLC hardware components, converting relay logic to ladder logic, comprehending ladder logic instruction functionality and identifying the PLC's data structure. Enables the student to use hands-on training equipment to create, implement and troubleshoot ladder logic programs that simulate real automated machine control and processes.

Prerequisite: Grade of C or higher in the following course: EIC 2325 or permission of instructor.

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.

EIC 2340 - SCADA (4)

Provides an in-depth overview of how remote sensing and actuation are combined with modern communication techniques to effectively monitor and control industrial processes. Supervisory Control & Data Acquisition (SCADA) refers to an industrial control system, a computer system that monitors and controls processes.

EIC 2740 - Fire Alarm Fundamentals (4)

Covers terminology, symbols, diagrams, devices, circuits and wiring. Focuses on basic layouts and principles involved in fire alarm system design and construction.

EIC 2811 - IECC Energy Conservation Code (4)

Provides an understanding of the International Energy Conservation Code and how the code addresses energy efficient design in both residential and commercial buildings.

EIC 2817 - Electrical Estimating/Costing (4)

Focuses on the fundamentals of electrical estimating, material takeoffs from prints, required labor hours, material loss allowances and scheduling to ensure orderly work progress.

EMP-Emergency Mgmt & Planning Courses

EMP 1001 - Emergency Management (3)

Presents a broad overview of an emergency management system and the importance of an integrated approach to managing emergencies. Enables the student to formulate the elements of an integrated teamwork system and devise specific actions for improving their own contributions to local emergency management teams. Focuses on all disciplines that work together in planning for or responding to emergencies.

EMP 1005 - Public Safety Applications (3)

Introduces a specialized type of community planning that identifies local government strategies, resources and responsibilities for protecting citizens from the effects of disasters and other major emergency events. Focuses on the Emergency Operations Plan (EOP) and a jurisdiction's game plan for dealing with potential catastrophes resulting from natural hazards and/or human-caused hazards. Examines EOPs in detail including their history and evolution, process, recommended content, style and format, involved stakeholders, and implementation methods. Covers the context of emergency planning as it relates to long-range community planning. Addresses methods for conducting a comprehensive community hazard analysis and highlights lessons learned in recovering from a disaster.

EMP 1006 - Exercise Design Evaluation (3)

Provides knowledge and the development of skills that enable the student to train a staff and to conduct an exercise that tests a community's plan and its operational response capability. Enables the student to manage exercise evaluation activities before, during, and after an emergency management exercise.

EMP 1007 - Emerg Op Center & Comm (3)

Provides the knowledge and skills to manage and operate an EOC during crisis situations. Covers aspects of properly locating and designing an EOC, how to staff, train and brief EOC personnel, and how to operate an EOC during various situations. Focuses on various aspects of information gathering and dissemination including best practices for use of computers in an EOC environment, promoting enhanced planning and better control information flow to safely and effectively make strategic response decisions.

EMP 1009 - Incident Command Systems (3)

Explores the dynamics of managing major emergency incidents and examines the National Incident Command System. Focuses on major incidents where large life, property, or economic losses are possible. Includes organization and staffing, incident and event planning/staffing, organizing a response to an incident, and incident resource management. Actual incidents are discussed and analyzed. Incorporates learning from the experience of others in handling major emergencies and preplanning for emergencies.

EMP 2040 - Leadership and Influence (3)

Explores the dynamics of managing major emergency incidents, focusing on the National Incident Command System. Covers major incidents where large life, property, or economic losses are possible. Includes organization and staffing, incident and event planning/staffing, organizing a response to an incident, and incident resource management. Actual incidents are discussed and analyzed. Focuses on the experience of others in handling major emergencies and the preplanning of emergencies.

EMP 2042 - Effective Communication (3)

Sharpens presentation and media skills of emergency management officials when giving and receiving information in emergency management contexts. Addresses public speaking and other areas of communication including one-on-one interactions, small group discussions, written communication, listening skills, and dissemination of public information through the media.

EMP 2044 - Developing Volunteer Resources (3)

Improves skills in recognizing volunteer resources in the community, and enhances the ability to manage the involvement of volunteers in all phases of emergency management. Encourages participants to think about the benefits of volunteer involvement, develop the ability to identify the wide range of talents volunteers have to offer, acknowledge and build upon the diversity of volunteers, and identify numerous resources and outreach mechanisms for reaching different populations.

EMP 2047 - Decision Making in a Crisis (3)

Focuses on individual and group decisions based on a model problem-solving process.

EMP 2050 - Business Emergency Management (3)

Covers general business practices as they apply to Emergency Management. This includes business continuity during a crisis or emergency situation and restoration of business after the crisis. Other aspects covered in this course include hazard analysis, IT solutions, resource analysis, and effective communication.

EMP 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.

EMP 2091 - Public Information Officer (3)

Provides the student an opportunity to practice and expand on public information skills in a crisis environment. Incorporates a highly interactive course that includes workshops on writing, public speaking, media interviews, and awareness campaign development. Covers media relations and public information planning.

EMS-Emergency Medical Service Courses

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.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; high school diploma or GED. Corequisite: EMS 1022, EMS 1023, EMS 1024, and EMS 1070 or prior credit equivalent to courses listed.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; high school diploma or GED. Corequisite: EMS 1021, EMS 1023, EMS 1024, and EMS 1070 or prior credit equivalent to the courses listed.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; high school diploma or GED. Corequisite: EMS 1021, EMS 1022, EMS 1024, and EMS 1070 or prior credit equivalent to the courses listed.

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 extrication, air medical support, hazardous materials, and terrorism.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; high school diploma or GED. Corequisite: EMS 1021, EMS 1022, EMS 1023, and EMS 1070 or prior credit equivalent to the courses listed.

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.

Prerequisite: Current Colorado or NREMT EMT or AEMT certification, or initial EMT or AEMT course completion within the last two years, or Colorado EMT or AEMT certification that is less than 6 months expired. If Colorado EMT or AEMT is greater than 6 months expired, or NREMT certificate is expired, the student must check with the NREMT to determine recertification requirements and if a refresher course will [partially] meet those requirements.

EMS 1062 - Wilderness EMS - Upgrade (3)

Provides an enhanced understanding of assessment and treatment skills in a remote challenging environment to currently certified EMS professionals of all levels. This course is designed to align with a variety of Wilderness EMS upgrade programs that focus on wilderness concepts and skills. Students will receive Certification of Completion upon successful completion.

Prerequisite: Current EMT or higher certification.

EMS 1070 - EMT Clinical (1)

Provides the EMT student with the clinical experience required for initial certification and some renewal processes.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; high school diploma or GED. Corequisite: EMS 1021, EMS 1022, EMS 1023, and EMS 1024 or prior credit equivalent to the courses listed.

EMS 1071 - AEMT Clinical Internship (2)

Builds on the Advanced Emergency Medical Technician (AEMT) student's fundamental knowledge of patient care in the clinical and field setting. The student will perform patient assessments through physical examination, and patient interviews of health history and current illness. The student will then use those assessment findings to develop and carry out a patient treatment plan. This will include pediatric, geriatric and adult patients with a variety of presentations. The student will also survey each field scene for safety considerations and scene management.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores. Corequisite: EMS 1127, EMS 1129, EMS 1125, EMS 1132, EMS 1133, and EMS 1135 or prior credit equivalent to the courses listed.

EMS 1075 - Special Topics (0)

Provides the student with a vehicle to pursue in depth exploration of special topics of interest

EMS 1078 - EMS Seminar (3)

Provides the student with the opportunity to explore local interests and needs in a less formal setting.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State AEMT certification; permission of instructor. Corequisite: EMS 1138, EMS 1081, and EMS 2070.

EMS 1080 - EMT Clinical Internship (3)

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State EMT certification; permission of instructor.

EMS 1081 - EMS Internship I (2)

Provides the learner with the opportunity to apply clinical concepts, strategies, and skills in a supervised field internship setting as a pre-hospital healthcare provider. Under the supervision of a preceptor, participants will be expected to manage all aspects of an emergency call 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. The course allows the learner to gain knowledge, skills, and experience that may be required for employment, or required as a pre-requisite for further Emergency Medical Services (EMS) education. The knowledge base for this course is based on current pre-hospital healthcare provider certification, and knowledge and skills acquired from EMS classes the participant has completed or is currently enrolled in.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State AEMT certification; permission of instructor. Corequisite: EMS 1138, EMS 1078, and EMS 2070.

EMS 1082 - EMS Internship II (5)

Serves as a continuation of EMS 1081 and provides the learner with the opportunity to apply clinical concepts, strategies, and skills in a supervised field internship setting as a pre-hospital healthcare provider. Under the supervision of a preceptor participants will be expected to manage all aspects of an emergency call 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. The course allows the learner to gain knowledge, skills, and experience that may be required for employment, or required as a pre-requisite for further Emergency Medical Services (EMS) education. The knowledge base for this course is based on current pre-hospital healthcare provider certification, and knowledge and skills acquired from EMS classes the participant has completed or is currently enrolled in.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State AEMT certification; permission of instructor. Corequisite: EMS 1140 and EMS 2079.

EMS 1125 - AEMT Fundamentals (2)

Provides the Advanced Emergency Medical Technician (AEMT) student with instruction in EMS systems, communications and documentation, pathophysiology, airway management, and the role of EMS in public health.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State EMT certification; permission of instructor. Corequisite: EMS 1127, EMS 1129, EMS 1030, EMS 1133, EMS 1135, and EMS 1071 or prior credit equivalent to the courses listed.

EMS 1127 - AEMT Special Considerations (2)

Introduces the Advanced Emergency Medical Technician (AEMT) student to the fundamental knowledge of growth, development and aging considerations in the emergency patient. The student will learn to use assessment findings to provide basic and selected advanced emergency care and transportation for a patient with special needs. These include the obstetric patient, neonatal patient, pediatric patient, geriatric patient, and patients with special challenges. Learners will apply this knowledge to patient assessment and the development of a treatment plan in a simulated setting. This course also provides an overview of the principles of safe ground ambulance operations, incident management, multiple casualty incidents, air medical responses, vehicle extrication, hazardous material awareness and terrorism and disaster response. Learners will apply critical thinking skills to ensuring the safety of a scene and a plan for safe patient care and transportation.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State EMT certification; permission of instructor. Corequisite: EMS 1129, EMS 1030, EMS 1125, EMS 1133, EMS 1135, and EMS 1071 or prior credit equivalent to the courses listed.

EMS 1129 - AEMT Pharmacology (1)

Provides the Advanced Emergency Medical Technician (AEMT) student with a basis for making clinical decisions in the pharmacologic management of patients commonly encountered in the pre-hospital setting. Topics include the legal and ethical aspects of pharmacotherapy, roles, responsibilities and techniques associated with medication preparation and administration, the classification and naming of medications, pharmacokinetics, pharmacodynamics and medication calculations. In addition, the mechanism of action, dose, route(s) of administration, therapeutic effects, adverse effects, and therapeutic indications for medications within the Advanced Emergency Medical Technician scope of practice are discussed in detail.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State EMT certification; permission of instructor. Corequisite: EMS 1127, EMS 1030, EMS 1125, EMS 1133, EMS 1135, and EMS 1071 or prior credit equivalent to courses listed.

EMS 1133 - AEMT Medical Emergencies (2)

Introduces the Advanced Emergency Medical Technician (AEMT) student to a fundamental knowledge of emergency care for the medical patient. This course provides instruction in the integration of physical exam findings, history findings, and pathophysiology when assessing and treating the medical patient. Topics addressed include neurology, immunology, infectious diseases, endocrine disorders, cardiovascular disorders, toxicology, respiratory emergencies, hematology, and renal disorders.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State EMT certification; permission of instructor. Corequisite: EMS 1127, EMS 1129, EMS 1030, EMS 1125, EMS 1135, and EMS 1071 or prior credit equivalent to the courses listed.

EMS 1135 - AEMT Trauma Emergencies (2)

Introduces the Advanced Emergency Medical Technician (AEMT) student to a fundamental knowledge of emergency care for the trauma patient. The student will learn how to utilize assessment findings to provide basic and selected advanced emergency care and transportation for the trauma patient.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State EMT certification; permission of instructor. Corequisite: EMS 1127, EMS 1129, EMS 1030, EMS 1125, EMS 1133, and EMS 1071 or prior credit equivalent to the courses listed.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State AEMT certification; permission of instructor. Corequisite: EMS 1078, EMS 1081, and EMS 2070.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State AEMT certification; permission of instructor. Corequisite: EMS 1082 and EMS 2079.

EMS 2070 - Clinical: EMS Intermediate (3)

Provides the EMT-I student with the required field experiences as required by the Colorado Department of Health.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State EMT certification; permission of instructor. Corequisite: EMS 1138, EMS 1078, and EMS 1081.

EMS 2079 - Seminar (3)

Provides students with an experiential learning opportunity.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State AEMT certification; permission of instructor. Corequisite: EMS 1140 and EMS 1082.

EMS 2082 - EMT Intermediate Internship (6)

Provides the EMT-Intermediate with a supervised clinical learning experience that meets or exceeds the requirements for the State of Colorado Department of Public Health and Environment. Enables the student to work with a preceptor for clinical and internship experience to develop an understanding of advanced life support patient care and assessment.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; Current Colorado State EMT certification; permission of instructor.

EMS-Hospital-based Paramedic**Programs Courses**

The following courses are offered in conjunction with hospital-based paramedic programs.

Only students accepted into the Hospital-based Paramedic programs may register for them. Prerequisites for these programs normally include successful completion of an EMT course, IV approval, Basic EKG interpretation, Anatomy and Physiology, and approximately one year of experience as an EMT. Contact an EMS faculty advisor for more information.

EMS 2025 - Paramedic Practice (3)

Introduces the paramedic student to the advanced practice of prehospital care. This course covers professional behavior, medical ethics, legal issues, patient assessment, therapeutic communication, clinical decision making, and basic and advanced airway management. This course discusses EMS's role in the healthcare continuum, professional communication, patient care documentation, IV fluid therapy and resuscitation, and the application of evidence based medicine. A brief overview of human anatomy, physiology and pathophysiology is included.

EMS 2026 - Paramedic Practice - Lab (2)

Teaches the skills necessary for the paramedic to apply professional behavior, medical ethics, legal issues, patient assessment, therapeutic communication, clinical decision making, and airway management. Serves as the companion course to Fundamentals of Paramedic Practice.

EMS 2027 - Paramedic Spec Considerations (3)

Introduces the paramedic student to concepts in assessing and meeting the emergency care needs of the neonate, pediatric, geriatric and special needs patient. This course focuses on epidemiology, pathophysiology, assessment and treatment of these patient groups. Common medical and traumatic presentations are addressed. Relevant psychosocial and ethno cultural concepts and legal and ethical implications are integrated throughout.

EMS 2028 - Special Considerations Lab (2)

Teaches the skills necessary for the paramedic to effectively assess and treat neonatal, pediatric, geriatric, and special needs patients utilizing skills and simulation scenarios. Serves as the companion course to Paramedic Special Considerations.

EMS 2029 - Paramedic Pharmacology (3)

Introduces the paramedic student to advanced emergency pharmacology, pharmacokinetics and pharmacodynamics. This course will include laws affecting the use and distribution of medications, medication dosing, clinical calculations, routes of administration and discussion of common medication classifications to include indications, contraindications and side effects.

EMS 2030 - Paramedic Pharmacology Lab (2)

Teaches the skills necessary for the paramedic to safely and effectively administer emergency medications. Serves as the companion course to Paramedic Pharmacology.

EMS 2031 - Paramedic Cardiology (5)

Introduces the paramedic student to cardiovascular emergencies and the care of patients presenting with cardiovascular emergencies. Topics will include assessment of the cardiovascular system, ECG acquisition and interpretation both single lead and 12 lead, pathophysiology of cardiovascular disease and treatments indicated for a given disease.

EMS 2032 - Paramedic Cardiology Lab (1)

Teaches the skills necessary for the paramedic to effectively assess and treat patients presenting with cardiovascular emergencies utilizing skills and simulation scenarios. Serves as the companion course to Paramedic Cardiology.

EMS 2033 - Paramedic Medical Emergencies (4)

Expands on the paramedic student's knowledge of medical emergencies with the integration of assessment findings in formulating a field impression and implementing a treatment plan. This course will cover principles of epidemiology and pathophysiology related to common medical emergencies including: neurological, abdominal and gastrointestinal disorders, immunological, infectious diseases, endocrine disorders, psychiatric disorders, toxicological, respiratory, hematological, genitourinary, gynecological, non-traumatic musculoskeletal disorders, and diseases of the eyes, ears, nose, and throat.

EMS 2034 - Medical Emergencies Lab (1)

Teaches the skills necessary for the paramedic to effectively assess and treat patients with a variety of medical emergencies utilizing skills and simulation scenarios. Serves as the companion course to Paramedic Medical Emergencies.

EMS 2035 - Paramedic Trauma Emergencies (4)

Expands on the paramedic student's knowledge of trauma emergencies with the integration of assessment findings in formulating a field impression and implementing a treatment plan for an acutely injured patient. The course will provide an in depth evaluation of trauma to include: categorization of trauma patients, incidence of trauma, trauma systems, types of injury, trauma assessment, documentation in trauma, trauma scoring scales, trauma center designations, and transfer of patients.

EMS 2036 - Trauma Emergencies Lab (1)

Teaches the skills necessary for the paramedic to effectively assess and treat patients with a variety of traumatic emergencies utilizing skills and simulation scenarios. Serves as the companion lab course for Paramedic Trauma Emergencies.

EMS 2037 - Paramedic Internship Prep (2)

Reviews concepts and techniques used in the prehospital setting.

EMS 2080 - Internship I: (6)

Serves as the preceptor/internship program for paramedic students.

EMS 2081 - Paramedic Internship II (6)

Serves as the continuation of EMS 2080, preceptor program for paramedic students.

ENG-English Courses (also see CCR)

English prerequisites:

Accuplacer Sentence Skills 095 or SAT EVIDENCE-BASED READ/WRIT 470 or ACT English 18 or SAT Verbal/Critical Reading 440 or Exempt English 90 or

Prior College English 1021 or Undergraduate level ENG 090 Minimum Grade of C or

Undergraduate level ENG 1021 Minimum Grade of C or

Undergraduate level ENG 1022 Minimum Grade of C or

Undergraduate level ENG 1031 Minimum Grade of C or

Undergraduate level CNE 800 Minimum Grade of C or

Undergraduate level CNE 801 Minimum Grade of C or

Exempt College Comp & Read-CCR 0092 or Undergraduate level CCR 0092 Minimum Grade of C or

Undergraduate level CCR 0093 Minimum Grade of C or

Undergraduate level CCR 0094 Minimum Grade of C or

COMPASS Reading Skills 79 or (CCPT Reading (Adaptive) 096 and CCPT Essay 5) or (CCPT Reading (Adaptive) 080 and CCPT Essay 6) or College Readiness Writing 100

ENG 0092 - Composition and Reading (5)

Integrates and contextualizes college-level reading and writing. Cross-Listed as: CCR 0092.

ENG 0094 – Studio 121 (3)

Integrates and contextualizes college-level reading and writing. Cross-Listed as: CCR 0094.

ENG 1021 - English Composition I: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores or an English score of 18 or above on the ACT.

ENG 1022 - English Composition II: 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: Grade of C or higher in the following courses: ENG 1021 or ENG 1031.

ENG 1031 - Technical Writing I: CO1 (3)

Focuses on principles for researching, organizing, writing, and revising clear, readable documents for industry, business, and government. Develops skills one can apply to a variety of technical documents. This is a statewide Guaranteed Transfer course in the GT-CO1 category.

Prerequisite: Grade of C or higher in the following course: CCR 0092 or CCR 0094 or equivalent placement scores.

ENG 2021 - Creative Writing I: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

ENG 2022 - Creative Writing II (3)

Provides continued development of written expression in such forms as poetry, fiction, and/or nonfiction writing.

Prerequisite: Grade of C or higher in the following course: ENG 2021.

ENG 2026 - Fiction Writing (3)

Teaches techniques for creating fiction, including the study and appreciation of the language and forms of the short story.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

ENG 2027 - Poetry Writing (3)

Teaches techniques for creating poems, including study of figurative language, forms, and sound patterns of poetry.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

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 material 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores. Corequisite: Art 1205.

ENG 2030 - Creative Nonfiction (3)

Teaches students to incorporate literary techniques into factual writing. Enables the student to survey a wide range of readings and analyze form and content. Includes critical review, biographical profiles, travel writing, and memoirs. Provides the opportunity for students to write and review their own nonfiction in a supportive, constructive setting.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

ENG 2031 - Literary Magazine (3)

Teaches the student the editorial process involved in preparing a literary magazine for publication. Covers the process of selection of material (fiction, nonfiction, poetry, and visual art) to be published, as well as design, layout, and production to prepare a manuscript for publication. Enables the student to produce a literary magazine.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

ENG 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.

ENG 2085 - Independent Study (3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

ENV-Environmental Science Courses

ENV 1010 - Natural Disasters: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 0250 or MAT 0300 or equivalent placement scores.

ENV 1111 - Environmental Sci w/Lab: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 0250 or MAT 0300 or equivalent placement scores.

ESL-English as a Second Language Courses

ESL 0033 - Adv Listening & Speaking (3)

Provides students with opportunities to increase the listening and speaking skills required in academic and work situations. Emphasizes vocabulary building, listening and notetaking strategies, as well as questioning, discussion, and presentation skills.

ESL 0043 - Advanced Reading (4)

Prepares the student for academic reading assignments. Assists the student to read more accurately and critically through the development of vocabulary knowledge and reading skills. Introduces research skills.

ESL 0053 - Advanced Composition (4)

Reviews paragraph organization and develops the skill of writing essays using selected rhetorical modes. Emphasizes accurate use of advanced grammatical structures. Includes summarizing, paraphrasing, and research writing.

ESL 0091 - Basic Intensive English (8)

Develops and strengthens oral and written communication in English for non-native speakers at the basic level by focusing on the four skills: grammar, reading, writing, and listening/speaking. Provides the first of six levels of intensive English as a second language.

ESL 0092 - High Basic Intensive English (8)

Develops and strengthens oral and written communication in English for non-native speakers at the high basic level by focusing on the four skills: grammar, reading, writing, and listening/speaking. Provides the second of six levels of intensive English as a second language.

ESL 0093 - Low Inter Intensive English (8)

Develops and strengthens oral and written communication in English for non-native speakers at the low intermediate level by focusing on the four skills: grammar, reading, writing, and listening/speaking. Provides the third of six levels of intensive English as a second language.

ESL 0094 - Intermediate Intensive English (8)

Develops and strengthens oral and written communication in English for non-native speakers at the intermediate level by focusing on the four skills: grammar, reading, writing, and listening/speaking. Provides the fourth of six levels of intensive English as a second language.

ESL 0095 - High Inter Intensive English (8)

Develops and strengthens oral and written communication in English for non-native speakers at the high intermediate level by focusing on the four skills: grammar, reading, writing, and listening/speaking. Provides the fifth of six levels of intensive English as a second language.

ESL 0096 - Low Advanced Intensive English (8)

Develops and strengthens oral and written communication in English for non-native speakers at the low advanced level by focusing on the four skills: grammar, reading, writing, and listening/speaking. Provides the sixth of six levels of intensive English as a second language.

ESL 1075 - Special Topics (1)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

EST-Esthetician Courses**EST 1010 - Intro Skin Care (3)**

This course covers the study of skin in both theory and practical applications for skin care professionals. Topics included in the course are: skin structure and function, massage manipulations while providing facials and the benefits derived from a proper facial, and good skin care routines. Training is conducted in a classroom or lab setting using manikins or models.

EST 1011 - Intermediate Skin Care (2)

This course covers skin care and practical application pertaining to anatomy, skin disorders, skin types and facial shapes. Students will help patrons to select the proper skin care treatment(s). Practical and theory application can be done in specialized classes or supervised salon setting using models or customer service.

EST 1060 - Disinfection, Sanitation (2)

Introduces the various methods of disinfection, sanitation and safety as used today in the industry. Classroom study of bacteriology and the terminology dealing with disinfection, sanitation and safety.

EST 1061 - Int Disinfection, Sanitation (3)

Presents theory and the daily utilization and practice of the proper methods of disinfection, sanitation, and safety. Procedures as related to all phases of the industry. Training is provided in a supervised (clinical) setting.

EST 1075 - Special Topics (0.5)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

EST 2010 - Advanced Skin Care (2)

This course covers advanced techniques for massage, skin care, and lash/brow tinting. Theory and practical procedures ready the student for employment and preparation for State Board Licensing Examination. Instruction is provided in specialized classes or in a supervised salon setting.

EST 2011 - Make-up (1)

This course covers cosmetics and their functions for the skin care professional, including the importance of color theory, facial types and skin tones as they relate to facial makeup. Topics in this course include: Instruction from the basic makeup application, corrective makeup procedures, and disinfection and sanitation pertaining to all aspects of makeup.

EST 2012 - Hair Removal (3)

This course covers in-depth study and practice of hair removal and the practice of patron protection and safety. Training for general waxing and body waxing procedures are provided. Demonstration of disinfection and sanitation as it pertains to Colorado rules and regulations will be practiced.

EST 2030 - Preparation for State Board (2)

Provides preparation for State Boards. Allows the student the opportunity to gain knowledge in the practical and/or written examination required by the Colorado Board of Barber/Cosmetology.

EST 2060 - Adv Disinfection, Sanitation (2)

Provides advanced training on disinfection, sanitation, and safety is incorporated in a supervised salon (clinical) setting. Advanced techniques will ready the student for employment. Student preparation for the State Board Licensing Examination in theory and practical procedures for disinfection, sanitation and safety.

EST 2078 - Advanced Esthetician Studies (2)

Allows advanced training in all course areas and allows student training for State Board of Cosmetology Licensing Examination. Hours will be arranged and credits will vary.

EST 2080 - Internship (6)

This course provides students with the opportunity to supplement coursework with practical work experience related to their educational programs. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

EST 2085 - Independent Study ()

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

EST 2088 - Esthetician Practicum (10)

Allows students to continue their practice in the following courses: Sterilization, Sanitation, Safety, Electricity, Chemistry, Light Therapy, Massage, Skin Care, Make-up, and Salon Management.

ETH-Ethnic Studies Courses**ETH 2000 - Intro to Ethnic Studies: 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. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

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 which have impacted African-Americans through contemporary times.

ETH 2024 - Intro to Chicano Studies (3)

Introduces students to skills development in multicultural education. Covers Chicano history, migration and labor, education, law and Chicano culture.

FIW-Fine Woodworking Courses**FIW 1002 - Classical Guitar Construction (3)**

Create a Spanish-style, nylon string classical guitar from scratch. Beginning with raw materials, the student is expected to build a classical guitar.

FIW 1003 - Steel String Guitar Construction (6)

Create a steel string guitar from scratch. Beginning with raw materials, the student is expected to build either an OM (Orchestra Model) or a dreadnaught style steel string guitar.

Prerequisite: Grade C or higher in FIW 1012.

FIW 1004 - Elements of Design (2)

Guides students in developing an approach to furniture design that will help them with either a current or future project. The class covers sketches, shop drawings, and model making.

FIW 1005 - Guitar Setup and Repair (3)

Introduces students to instrument setup and repair. Students learn how to set up their instruments for optimal playability based on musical genres and playing styles. Crack repair, finish repair, fretwork and electronics are covered.

FIW 1009 - Introduction to Cabinetmaking (4)

Introduces the student to the various components of cabinetmaking. The course will teach the student basic shop drawing, material properties, joinery, and power and stationary tools as related to basic cabinet construction. Cabinet construction and safe and efficient use of machinery and materials are the essential goals of this course.

FIW 1012 - Introduction to Woodworking (4)

Introduces woodworking based on traditional woodworking techniques and modern machinery practices to develop understanding of basic woodworking concepts and procedures. The course includes in-depth instruction of hand, power, and stationary tools and thorough instruction on the elements of design, shop drawings, and wood science.

FIW 1016 - Wooden Hand Plane Making (1)

Covers design and build of a custom wooden hand plane, unique to the maker.

FIW 1017 - Steel-String Guitar Constr (4)

Covers the design and construction of a steel-string acoustic guitar from raw materials or milled lumber.

FIW 1018 - Introduction to Turning (3)

Explores the capacities of a lathe through spindle and faceplate turnings. The use of bead, cove, taper, cylindrical, v-cuts proportion and curved line relationships are examined. Lathe components, tools, and sharpening are explored.

FIW 1019 - Intermediate Turning I (3)

Expands upon FIW 1018 (Introduction to Turning) to include turning natural edge bowls, long stem goblets, spiral turning, end grain hollowing, open forms, and closed forms/internal hollowing techniques.

Prerequisite: Grade of C or higher in the following course: FIW 1018.

FIW 1020 - Intermediate Turning II (3)

Explores the lathe in turning large diameter platters, texturing, square bowls, triangular bowls, Saturn bowls, lidded boxes and sphere projects. This course is a continuation of FIW 1019 Intermediate Turning I.

Prerequisite: Grade of C or higher in the following course: FIW 1019.

FIW 1021 - Advanced Turning (3)

Develops advanced turning techniques to create woodturning art. Students will learn the use of concentric chucks to do multi-access turning of spindles, bowls and hollow vessels. They will also learn to use grinders to create twisted hollow forms and carve on the exterior of bowls and vases. The students will also learn thread chasing, segmenting, and multi-sided box techniques. This class is an extension of FIW 1020 Intermediate Turning II.

Prerequisite: Grade of C or higher in the following course: FIW 1020.

FIW 1022 - Wood Carving (3)

Allows student to experiment with hand- and power-carving tools to discover the qualities of numerous materials and the many possibilities of wood shaping through carving. The student produces samples of relief and three-dimensional carvings and learns proper sharpening procedures.

FIW 1024 - Electric Guitar Construction (4)

Covers the design and construction of an electric guitar from raw materials and milled lumber.

Prerequisite: FIW 1012 (grade C or higher).

FIW 1025 - Finishing Wood (3)

Teaches students the wide variety of finishes available from the oldest formulations to the wide array of modern films and stains. Students experiment with a representative sampling of colorations and surface finishes on a variety of wood species using a selection of application techniques.

FIW 1026 - French Polish (1)

Introduces students to shellac as a wood finish. Students will learn a modern-day approach to applying a traditional French polish shellac finish by hand.

FIW 1027 - Classical Guitar Construction (4)

Course covers the design and construction of a Spanish-style, nylon string classical guitar from raw materials or milled lumber.

Prerequisite: Grade of C or higher in one of the following courses: FIW 1012.

FIW 1028 - Doormaking (4)

Focuses on the planning, design, selection and purchase of materials, construction, finishing and hanging of a door that the students has constructed. Examines assorted styles of door construction, joinery, glues and fabrication techniques.

Prerequisite: Grade of C or higher in the following courses: FIW 1009 or FIW 1012 or permission of instructor.

FIW 1029 - Adv Electric Guitar Constr (4)

Design and build an electric guitar. The course introduces advanced techniques, teaching students to design their own electric guitar from scratch. Students build their guitar using hand tools, power tools, and stationary tools. The class furthers students' understanding of the various parts of an electric guitar and how they work together to form a functioning instrument, as well as basic finish and setup.

Prerequisite: Grade of C or higher in the following courses: FIW 1012.

FIW 1030 - Mandolin Construction (6)

Design and build a carved top/back mandolin from a set of plans.

FIW 1031 - Electric Guitar Construction (6)

Covers the design and construction of an electric guitar from raw materials and milled lumber.

FIW 1060 - Workbench Construction (4)

Facilitates the design and fabrication of a workbench based on specific user needs. This course involves heavy lifting.

Prerequisite: Grade of C or higher in the following course: FIW 2001.

FIW 1070 - Woodworking Lab I (1)

Continues to build upon woodworking skills and techniques.

FIW 1072 - Woodworking Lab III (2)

Continues to build upon woodworking skills and techniques.

FIW 1074 - Woodturning Lab II (1)

Continues to build upon woodworking skills and techniques.

FIW 1075 - Special Topics (3)

Assists students who are interested in individual topics within the normal curriculum. The student identifies and selects objectives that they need for industry upgrades or special training to enter the workforce. The student may explore current topics, issues or activities related to one or more aspects of the Fine Woodworking industry.

FIW 1076 - Special Topics (0)

Assists students who are interested in individual topics within the normal curriculum. The student identifies and selects objectives that they need for industry upgrades or special training to enter the workforce. The student may explore current topics, issues or activities related to one or more aspects of the Fine Woodworking industry.

FIW 1077 - Special Topics (4)

Assists students who are interested in individual topics within the normal curriculum. The student identifies and selects objectives that they need for industry upgrades or special training to enter the workforce. The student may explore current topics, issues or activities related to one or more aspects of the Fine Woodworking industry.

FIW 1085 - Independent Study (0)

Involves making a project utilizing only hand tools. Utilizes hand tools to learn techniques and abilities that improve woodworking skills. Compares power tool performance.

FIW 2000 - Veneering and Marquetry (3)

Design and create a marquetry project. The course covers the surface decoration of wood - both edge and face treatments through the use of thin, often expensive, exotic or figured woods. Manmade and solid substrates for veneering as well as available patterns, styles, and marquetry techniques are explored.

FIW 2001 - Furniture I - Table Making (4)

Explores advanced wood joinery, using both hand and power tool techniques in constructing a table. This course will include two table projects. The first project will explore production style of building. The second project will be designed by the student and will focus on fine craft and design to create a table that incorporates curved elements and joinery.

Prerequisite: Grade of C or higher in one of the following courses: FIW 1012.

FIW 2002 - Furniture II-Carcass Construct (4)

Explores advanced wood joinery, using both hand- and power-tool techniques in frame and carcass-style construction. Students will focus on fine craft and design to create a free-standing, solid-wood cabinet. This course follows FIW 201 - Furniture I.

Prerequisite: Grade of C or higher in the following course: FIW 2001.

FIW 2003 - Furniture III-Chair Making (4)

Explores advanced wood joinery, using both hand and power tool techniques in constructing a chair.

Prerequisite: Grade of C or higher in the following course: FIW 2001.

FIW 2007 - Workbench Construction (6)

Design and fabricate a workbench to be used in woodworking, based on specific needs and from a complete set of drawings.

Prerequisite: Grade of C or higher in the following course: FIW 2001.

FIW 2008 - Furniture Restoration & Repair (3)

Teaches the student to repair and restore furniture. The student will learn how to determine the adhesive and finish used, repair veneer, replace broken pieces, reassemble reconditioned furniture repair, and restore finishes. The student will learn how to determine the original construction methods employed in order to repair furniture.

Prerequisite: Grade of C or higher in the following course: FIW 1000 or FIW1025.

FIW 2009 - Intermediate Cabinetmaking (4)

Covers cabinet types, kitchen and cabinet design, layout, construction, hardware installation, materials, power tool use, accessories and estimation.

Prerequisite: Grade of C or higher in FIW 1009.

FIW 2010 - Bending and Laminations (4)

Involves the process of curving natural and manmade panels through a variety of methods including spaced kerfs, cold lamination and steam bending. Emphasizes form construction, various qualities of different wood species, and adhesive selection.

Prerequisite: Grade of C or higher in the following course: FIW 2012.

FIW 2012 - Contemporary Furniture Making (4)

Introduces students to the business of studio furniture and directs their path in designing their style of contemporary furniture. Students will create unique and meaningful designs including prototypes leading to a final piece of furniture. This course builds upon the concepts and skills learned in FIW 1004 Elements of Design and FIW 2001 Furniture I.

Prerequisite: Grade of C or higher in the following course: FIW 2001.

FIW 2013 - Adv Contemporary Furniture (4)

Explores the creative possibilities of making contemporary furniture. Student will explore alternate forms and materials as they build a project that goes beyond conventional ideas of furniture making. This course builds upon skills learned in FIW 212 Contemporary Furniture Making

Prerequisite: Grade of C or higher in the following course: FIW 2012.

FIW 2017 - Advanced Cabinetmaking (4)

Develop familiarity with various types and designs of cabinets used in residential and commercial construction, including curved/radius cabinets and door fabrication. Construct and install shop-built cabinets including a variety of door styles, application of plastic laminate and solid surface materials. The proper use of power tools is emphasized. This course expands the skills taught in FIW 1009 – Intro to Cabinetmaking and FIW 2009 – Intermediate Cabinetmaking.

Prerequisite: Grade of C or higher in the following course: FIW 1009 and FIW 2009.

FIW 2019 - Woodworking Lab (4)

Provides the opportunity to create a piece to expand woodworking skills through the design and construction of a carefully selected woodworking project. In collaboration with the instructor, the student creates drawings, chooses materials, resolves joinery techniques, estimates and constructs the project. Examines a profitable woodworking business.

Prerequisite: Grade of C or higher in the following course: FIW 2001.

FIW 2031 - Adv Electric Guitar Construct (6)

Design and build an electric guitar. The course introduces advanced techniques, teaching students to design their own electric guitar from scratch. Students build their guitar using hand tools, power tools, and stationary tools. The class furthers students' understanding of the various parts of an electric guitar and how they work together to form a functioning instrument, as well as basic finish and setup. This class builds on skills learned in FIW 1031 Electric Guitar Construction.

Prerequisite: FIW 1031.

FIW 2033 - Advanced Lutherie Lab (4)

Expands on learned skills and practices from previous lutherie classes (FIW 1002 and FIW 1003) by generating new designs, practicing proper planning, and applying skills to create a personalized musical instrument.

FIW 2035 - Drum Building (6)

Teaches students the professional techniques and skills used to build a drum set in the western context. The course emphasizes sonic and aesthetic design. The course culminates with each student designing and producing a four-piece drum set (2 toms, 1 bass, and 1 snare).

FIW 2051 - CNC Woodworking Router I (3)

Develops basic skills and knowledge in using a Computer Numerically Controlled (CNC) router. The course covers using computer-based drafting programs to set up a vector-based drawing and properly outputting files to a router. Students gain an understanding of the use of the CNC router for use in fields such as woodworking, model making, prototyping, tooling, and signage.

FIW 2055 - CNC Laser I (3)

Offers basic skills and knowledge in using Computer Numerically Controlled (CNC) laser cutting and engraving machines. Students use computer-based drawing programs to set up a vector-based drawing and properly output files to a laser machine. Students will explore cutting and marking various materials used in woodworking, modeling, prototyping, tooling, and signage.

FIW 2057 - CNC Wood Router 3 & 4 Axis I (4)

Develops techniques for 3- and 4-axis Computer-Aided Manufacturing (CAM) and Computer Numerical Control (CNC) wood router machining. This course focuses on taking 3D Computer-Aided Design (CAD) models and writing tool paths that utilize all aspects of a 3- and 4-axis CNC machine. May include 2.5-axis techniques as necessary.

Prerequisite: Grade of C or higher in the following course: CAD 1115 or FIW 2051.

FIW 2060 - Woodworking Intensive I (12)

Focuses on traditional woodworking tools and techniques for creating furniture and utility objects while introducing students to technological advancements in the industry. Students will focus on design and professional practices to better prepare for entrepreneurial endeavors.

FIW 2061 - Woodworking Intensive II (12)

Focuses on traditional woodworking tools and techniques for creating furniture and utility objects while introducing students to technological advancements in the industry. Design and professional practices will be carefully considered for each project. This class functions as a natural progression of Woodworking Intensive I (FIW 2060).

FIW 2075 - Special Topics (1-6)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

FIW 2076 - Special Topics (4)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

FIW 2077 - Special Topics ()

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

FIW 2085 - Independent Study (1-12)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: Permission of instructor.

FRE-French Courses**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: Grade of C or higher in the following course: FRE 1001 or equivalent placement score or permission of instructor.

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: Grade of C or higher in the following course: FRE 1011 or equivalent placement scores or permission of instructor.

FRE 2011 - French Language III: AH4 (3)

Continues French I and II in the development of increased functional proficiency in listening, speaking, reading and writing the French language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; FRE 1012 or equivalent placement scores or permission of instructor.

FRE 2012 - French Language IV: AH4 (3)

Continues French I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the French language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; FRE 2011 or equivalent placement scores or permission of instructor.

FST-Fire Science Technology Courses

All courses in Fire Science Technology have a prerequisite of a grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1000 - Firefighter I (9)

Addresses the requirements necessary to perform at the first level of progression as identified in National Fire Protection Association (NFPA) 1001, Firefighter Professional Qualifications. This is a lecture and lab course for meeting the NFPA 1001, level I, standard.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores. Corequisite: FST 1007.

FST 1001 - Firefighter II (3)

Addresses the requirements necessary to perform at the second level of progression as identified in National Fire Protection Association (NFPA) 1001, Firefighter Professional Qualifications. This is a lecture and lab course for meeting the NFPA 1001, level II, standard.

Prerequisite: Grade of C or higher in the following courses: FST 1000 and FST 1007 and CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1002 - Principles/Emergency Services (3)

Provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government ; laws and regulations affecting the fire service; fire service nomenclature ; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1003 - Fire Behavior & Combustion (3)

Explores the theories and fundamentals of how and why fires start, spread, and are controlled.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1005 - Building Construction for Fire (3)

Provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of consideration and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1006 - Fire Prevention (3)

Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1007 - HazMat Operations (Level I) (3)

Introduces hazardous materials incidents, recognizing and identifying hazardous materials, planning response, implementing response procedures, decision making, and continued evaluation at the awareness and operation level.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1009 - Occupational Safety & Health (3)

Introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, and technical rescue. This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout emergency services.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1010 - Job Placement and Assessment (3)

Addresses all aspects of the Fire Service entrance examination process and especially emphasizes various components of the exam, including the written, physical abilities, and oral interview. The objective of this class is to help increase the entrance firefighter candidate's chance of obtaining a career in the Fire Service.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1021 - Technical Rope Rescue (4)

Provides students with the knowledge and skills to handle low and high angle rescues using rescue rope and associated hardware. The course takes students from the introductory level up to advanced skills in three separate sessions. Belay, rappel and raising systems are taught in a real-life setting in both high- and low-angle rescue environments. Students are also taught care and maintenance of equipment.

Prerequisite: Grade of C or higher in the following courses: FST 1000, FST 1007 and CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1051 - Driver-Operator (3)

Provides the student with the basic knowledge and skills to safely operate fire apparatus according to the NFPA professional standard. Enables the student to display and demonstrate knowledge of fire apparatus, operation of apparatus, pumps and pumping, hydraulics calculations, maintenance and testing.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

FST 1060 - Physical Abilities Test Prep (3)

Prepares students for the CPAT test and other related fitness testing for entry level firefighters. The course will focus on aerobics and strength training to assist students in passing a CPAT test or any related fitness entry level test. Students will also be trained on how to use various firefighting tools as they pertain to how the tools will be used in the CPAT or other related entry level fitness test.

FST 1070 - Clinical I (1)

Offers the clinical practicum to apply the related fire science technology.

Corequisite: FST 1000, FST 1007 or permission of instructor.

FST 1075 - Special Topics (1-6)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

FST 2001 - Instructional Methodology (3)

Identifies the roles and responsibilities of the fire service instructor. Includes oral communication skills, concepts of learning, planning and development of lesson plans and instructional materials and delivery methods, testing and evaluations, records and reports, and demonstration of instructional abilities. Fire Instructor I State Certification is possible.

Prerequisite: Grade of C or higher in the following courses: FST 1000, FST 1002, FST 1007 or permission of instructor.

FST 2002 - Strategy & Tactics (3)

Provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground.

FST 2003 - Fire Hydraulics & Water Supply (3)

Provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

Prerequisite: Grade of C or higher in the following courses: FST 1005 and MAT 1140.

FST 2004 - Principles of Code Enforcement (3)

Provides the students with the fundamental knowledge of the role of code enforcement in a comprehensive fire prevention program.

Prerequisite: Grade of C or higher in the following courses: FST 1002, FST 1005, FST 1006, FST 2009 or permission of instructor.

FST 2005 - Fire Investigation I (3)

Provides the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes.

Prerequisite: Grade of C or higher in the following course: FST 1002 or permission of instructor.

FST 2006 - Fire Co Superv and Leadership (3)

Covers fire department organization, management philosophies, leadership traits, time management, group dynamics, communications, motivation counseling, conflict resolution, and employee discipline. Meets components of Fire Officer I State Certificate.

Prerequisite: Grade of C or higher in the following courses: ENG 1021, FST 1002, FST 2002 or permission of instructor.

FST 2007 - Strategy and Tactics II (3)

Focuses on tactics and strategies associated with transportation emergencies and fires, high-rise fires, below-ground incidents, confined space emergencies, and special rescue situations.

Prerequisite: Grade of C or higher in the following course: FST 2002 or permission of instructor.

FST 2009 - Fire Protection Systems (3)

Provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

Prerequisite: Grade of C or higher in the following courses: FST 1000 and FST 1007 or permission of instructor.

FST 2052 - Fire Investigation II (3)

Provides the student with advanced technical knowledge on rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation, and testifying.

Prerequisite: Grade of C or higher in the following courses: FST 1000, FST 1002, FST 1003 and FST 2005 or permission of instructor.

FST 2053 - NIMS (3)

Focuses on the National Incident Management System including fire ground management and resource management. Multiagency coordination systems are discussed, organization preparedness for large scale emergencies, Communication and information are addressed. The course concludes with a review of the National Response Plan.

Prerequisite: Permission of instructor.

FST 2054 - HazMat Technician Level (3)

Focuses on techniques associated with hazardous materials mitigation, the use of monitoring devices, components of a mitigation teams, command and control of hazardous materials incidents.

Prerequisite: Grade of C or higher in the following courses: FST 1000 and FST 1007.

FST 2055 - Fire Service Management (3)

Serves as the basic management course for present and potential members of the fire service, and for students and members of other fire science-related professions. Introduces the student to current management practices and philosophies and real-world applications from the supervisor's point of view. Covers decision making/problem solving, communication skills, conflict resolution, creativity and innovation, as well as the role of the manager in supervising personnel and programs, e.g., motivation, leadership, counseling, ethics, and handling discipline and grievances.

Prerequisite: Grade of C or higher in the following courses: FST 2006 or permission of instructor.

FST 2057 - Fire Department Administration (3)

Focuses on the operations of volunteer and combination fire departments, compliance with standards and ordinances, funding, recruiting, hiring and retaining employees, funding and budgeting, organizational planning and public relations.

Prerequisite: Grade of C or higher in the following course: FST 2006 or permission of instructor.

FST 2058 - Wildland Fire Incident Mgmt (3)

Introduces and develops supervisory and decision-making skills for fire line management individuals. Covers (1) First Attack Incident Commander, (2) Crew Supervisor, (3) Incident Commander Multi-resource, and (4) Task Force/Strike Team Leader. All four courses are certifiable by the Incident Command System under NIIMS and recognized by the National Wildfire Coordinating Group. Covers fire line safety, size-up, incident planning, ordering, tactics, strategies, and administrative duties.

Prerequisite: Grade of C or higher in the following courses: FSW 1000 and FSW 1001.

FST 2059 - Wildland Firefighting Tactics (3)

Focuses on management of uncontrolled fire burning, urban/wildland interface, strategy and tactics used in controlling wildland fires, prevention methods, and incident command practices.

Prerequisite: Grade of C or higher in the following courses: FST 1003, FSW 1000 and FSW 1001.

FST 2075 - Special Topics (1-4)

Provides students with a vehicle to pursue in depth exploration of special topics of interest not previously offered. Includes National Fire Academy courses, VFIS courses, NFPA certification courses or other special subject classes that do not fall under the standard FST curriculum.

Prerequisite: Permission of instructor.

FST 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.

Prerequisite: Permission of instructor.

FST 2089 - Capstone ()

Evaluates the culmination of student learning within a given program of study. This course will include an evaluation process of an entire program of study based on individual program/discipline objectives.

Prerequisite: Permission of instructor.

FWS-Fire Science Wildland Courses

FSW 1000 - S-190 Intro to Wildland Fire (1)

Provides instruction in the primary environmental factors that affect the start and spread of wildfire and recognition of potentially hazardous situations. This course can be taught in conjunction with or prior to Firefighting Training S-130.

FSW 1001 - S-130 Firefighting Training (2)

Provides entry-level firefighter skills. A version of the L-180, Human Factors on the Fire line, is included as part of the course. Credit should be issued for S-130.

FVM-Film Video Media Courses

FVM 1005 - Video Production I (3)

This introduction to visual storytelling provides students with the opportunity to identify the components and explore the expressive visual elements that comprise narrative motion pictures. Students work in groups and/or pairs structuring and shooting exercises and original projects to be edited in FVT/FVM 160 (which must be taken concurrently). With an emphasis on creating emotional connections between character and audience, this course will help students learn techniques to create and illustrate effective and dimensional stories. Students will also learn the art of collaboration, which is necessary for film production.

Prerequisite: Basic computer skills are needed for success in this course.
Corequisite: MGD 1064.

FVM 1017 - Understanding Actor's Process (3)

Explores the actor's process with an emphasis on developing supportive and effective collaborations with other actors, directors and crew members. Applies techniques and acting theory to production and teaches basic terminology for actors in the screen environment. Introduces improvisation, script and character analysis, rehearsal process and protocol.

FVM 1036 - Short Script Analysis (3)

Introduces short subject script analysis and emphasizes critical thinking in regards to story technique and subtext behind the writers work. Students will identify and demonstrate an understanding of the methods of script analysis and translate knowledge into new context by summarizing, describing, interpreting, discussing and evaluating the three to forty minute short narrative, experimental, documentary, and animation scripts and films.

FVM 1050 - Development Film Expression (3)

Examines the nature and structure of Film/Video expression, concentrating on the way directors, editors, and cinematographers use visual techniques to serve the narrative. Students watch films in their entirety and then analyze them for their lighting, composition, camera position, movement, lens, depth of field, use of screen space, placement of performers, and editing techniques.

FVM 1063 - Digital Editing: Premiere (3)

Introduces the basic concepts and skills of non-linear editing using Adobe Premiere Non-Linear Editing Software. This course covers various editing techniques and how to apply the acquired knowledge to exercises. Develops an understanding of industry standards and expectations for aesthetic and technical merit. Capturing, outputting, and additional software integration will be demonstrated.

Corequisite: Basic computer skills are needed for success in this course.

FVM 1064 - Digital Editing: Final Cut Pro (3)

Introduces the basic concepts and skills of non-linear editing using Final Cut Pro. The student will demonstrate comprehension in various editing techniques and apply the acquired knowledge to exercises in the class. The student will analyze other editor's works for aesthetic and technical merit and develop an understanding of industry standards and expectations. Capturing, outputting, and software integration are covered.

FVM 2005 - Camera Techniques (3)

The narrative importance of different camera angles, movements, and focal planes are analyzed. Students will examine how video and 16mm film cameras work, and various techniques used in composition and the acquisition of images. Students will demonstrate and apply technique by shooting specific exercises both in and out of class.

Prerequisite: Grade of C or higher in the following course: MGD 1004 or FVM 1005.

FVM 2006 - Film/Video Lighting (3)

Lighting design and aesthetics in interior, exterior, location and studio settings. Students will examine and analyze photographic and motion picture lighting and plan, design and implement their re-creation. Students will then demonstrate and apply technique by shooting specific exercises both in and out of class.

Prerequisite: Grade of C or higher in the following course: MGD 1004 or FVM 1005.

FVM 2007 - Directing Workshop (3)

This class is a workshop focusing on the directing process, specifically: interpretation of the script, working with actors, rehearsal, blocking for camera, preparation for shooting, camera motivation and dynamics. Our focus will be on directing actors, playable direction, script analysis, scene breakdown and rehearsal, actor preparation, improvisation as a tool and shot selection.

Prerequisite: Grade of C or higher in the following courses: FVM 1005, FVM 1017, FVM 1036.

FVM 2021 - Commercial Media Production (3)

Focuses on the creation of compelling stories for professional clients designed to stimulate web and/or television audience response. The course will emphasize the demands of focused and brief communication to potential customers through the creation of commercials that surprise and delight viewers. Course work includes crafting scenes, scenarios and spots for national, local and regional clients.

Prerequisite: Grade of C or higher in the following course: FVM 1005 or MGD 2004 or FVM 2006 or MGD 2063 or MGD 2064.

FVM 2050 - Writing for Broadcast Media (3)

Introduction to the basic skills in developing and writing a feature screenplay or teleplay including conceptualization, genre conventions, act structure, scene construction and character development combined with summarizing and describing written work through pitch session and assessing and discussing through writer's meetings. Students will create final projects working in teams (TV pilots/episodes) or as individuals (screenplays).

Prerequisite: Grade of C or higher in the following course: FVM 1036.

FVT-Film & Video Technology

Courses

FVT 2017 - Acting for the Screen (3)

Instructs the student in the use of on-set and on-camera environments and techniques unique to television and film productions. It is designed for students interested in becoming professional screen actors. Students will be trained in various acting techniques created for television and film production.

FVT 2050 - Scriptwriting for Film & Video (3)

Develops screen writing skills, focusing on the basic format of the craft, scene construction, genre conventions, three act structure, characterization and idea generation. Students complete a 30-minute script suitable for shooting.

GED-General Equivalency Diploma Courses

GED 011 - GED Preparation (1-12)

Presents material for students who need to prepare for the GED tests: Language Arts, Writing; Language Arts, Reading; Mathematics; Science; and Social Studies.

GEO-Geography Courses

GEO 1005 - World Regional Geography: SS2 (3)

Examines the spatial distribution of environmental and societal phenomena in the world's regions; environmental phenomena may include topography, climate, and natural resources; societal phenomena may include patterns of population and settlement, religion, ethnicity, language, and economic development. Analyzes the characteristics that define world regions and distinguish them from each other. Examines the relationships between physical environments and human societies. 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

GEO 1006 - Human Geography: SS2 (3)

Introduces students to geographic perspectives and methods in the study of human societies by examining the spatial characteristics of populations, language, religion, ethnicity, politics, and economics. Examines the relationships between physical environments and human societies. This is a statewide Guaranteed Transfer course in the GT-SS2 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

GEO 1011 - Phys Geo: Landforms w/Lab: SC1 (4)

Introduces students to 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. The course incorporates an integrated process of lectures, discussion, and laboratory assignments. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

GEO 1012 - Phys Geo:Clim & Eco w/Lab: SC1 (4)

Introduces the principles of meteorology, climatology, world vegetation patterns, and world regional climate classification. The course includes investigating the geographic factors which influence climate such as topography, location, elevation, winds, and latitude. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

GEO 1060 - Global Climate Change: 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.

GER-German Courses

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: Grade of C or higher in the following course: GER 1011 or permission of instructor.

GER 2011 - German Language III : AH4 (3)

Continues German Language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the German language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: Grade of C or higher in the following courses: GER 1012 and CCR 0092 or CCR 0094 or equivalent placement scores.

GER 2012 - German Lang IV: GT-AH4 (3)

Continues German Language I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the German language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: Grade of C or higher in the following courses: GER 2011 and CCR 0092 or CCR 0094 or equivalent placement scores.

GEY-Geology Courses

GEY 1016 - Geology of Minerals and Gems (1)

Introduces information on the definition, formation, classification, and identification of minerals and gems, as well as their economic uses and well-known Colorado examples.

GEY 1018 - Rock & Mineral Identification (1)

Introduces basic information on the definition, formation, identification, and uses of rocks and minerals.

GEY 1032 - Dinosaurs of Colorado (2)

Introduces the evolutionary history of dinosaurs with special emphasis on the Mesozoic environment in Colorado, the dinosaurs that inhabited it, and the history of their discovery.

GEY 1034 - Oil and Gas Geology (1)

Introduces basic concepts of oil and gas geology including associated rock types, hydrocarbon formation mechanisms, stratigraphic relationships, permeability, and various types of traps. Oil and gas exploration and production methods are also covered. Examples from within Colorado are given.

GEY 1042 - Intro to GPS (1)

Provides instruction on the use and applications of Global Positioning System (GPS) receivers for outdoor activities. The course covers navigation, using a GPS receiver with topographic maps, mapping geologic and man-made features using GPS, and exchanging information with digital maps.

GEY 1044 - Introduction to Cave Science (2)

Introduces the science of caves, with emphasis on their geology. Course topics include cave development, the importance of karst geology and hydrology, cave speleothems, and organisms adapted to living in caves.

GEY 1075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of a special topic of interest.

GEY 1108 - Geology of National Parks: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 and MAT 0250 or MAT 0300; or equivalent placement scores.

GEY 1111 - Physical Geology w/Lab: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 and MAT 0250 or MAT 0300 or equivalent placement scores.

GEY 1112 - Historical Geology w/Lab: 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: Grade of C or higher in the following courses: GEY 1111, CCR 0092 or CCR 0094, MAT 0250 or MAT 0300; or equivalent placement scores.

GEY 1135 - Environmental Geol w/Lab: 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: Grade of C or higher in the following courses: CCR 0902 or CCR 0094 and MAT 0250 or MAT 0300; or equivalent placement scores.

GEY 1155 - General Oceanography w/Lab:SC1 (4)

Provides an introduction to modern geological and physical oceanography, with lesser emphasis on chemical and biological oceanography. Plate tectonics, seafloor geomorphology, marine sediments, coasts, physical and chemical properties of seawater, marine resources, environmental concerns, and water movement in currents, waves, and tides are among the topics covered. This course includes laboratory experience.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 and MAT 0250 or MAT 0300 or equivalent placement scores; .

GEY 2080 - Internship: (Insert title) (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.

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.

Prerequisite: Permission of instructor.

GEY 2228 - Field Geology (4)

Provides the opportunity to experience geology in a field setting, apply geologic principles, and complete in-depth studies of the specific geologic features and history of an area of geologic interest. The course will culminate in a field trip lasting between seven and fourteen days. The specific area of investigation is indicated in the schedule of classes each time the course is offered. Trips may be within or outside of the United States.

Prerequisite: Permission of instructor.

GIS-Geographic Information Systems Courses

GIS 1001 - Introduction to GIS (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 focus 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 2010 - Intermediate GIS (3)

Builds on the spatial analysis principles and concepts of GIS 101. Students work with advanced analytical tools and develop skills in spatial problem solving.

HIS-History Courses

HIS 1075 - Special Topics (1-3)

Focuses on the exploration of current topics, issues and activities related to one or more aspects of history.

HIS 1110 - The World: Antiquity-1500: HI1 (3)

Explores a number of peoples, groups, ideas, institutions, and trends that have shaped World History from the prehistoric era to 1500. Reflects the multiple perspectives of gender, class, religion, and ethnic groups in a broad global sense. Focuses on the common denominators among all people. This approach goes beyond political borders to provide a better appreciation for different cultures. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 1120 - The World: 1500-Present: HI1 (3)

Explores a number of peoples, groups, ideas, institutions, and trends that have shaped World History from 1500 to the present. Reflects the multiple perspectives of gender, class, religion, and ethnic groups in a broad global sense. Focuses on the common denominators among all people. This approach goes beyond political borders to provide a better appreciation for different cultures. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline. This is a statewide Guaranteed Transfer course in the GT-hi1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 1210 - US History to Reconst: HI1 (3)

Explores events, trends, peoples, groups, cultures, ideas, and institutions in North America and United States history, including the multiple perspectives of gender, class, and ethnicity, between the period when Native American Indians were the sole inhabitants of North America, and the American Civil War. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 1220 - US History since Civil War:HI1 (3)

Explores events, trends, peoples, groups, cultures, ideas, and institutions in United States History, including the multiple perspectives of gender, class, and ethnicity, between the period of the American Civil War and the present. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0902 or CCR 0094 or equivalent placement scores.

HIS 1310 - Western Civ:Antiquity-1650: HI1 (3)

Explores a number of events, peoples, groups, ideas, institutions, and trends that have shaped Western Civilization from the prehistoric era to 1650. Reflects the multiple perspectives of gender, class, religion, and ethnic groups. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 1320 - Western Civ: 1650-Present: HI1 (3)

Explores a number of events, peoples, groups, ideas, institutions, and trends that have shaped Western Civilization from 1650 to the present. Reflects the multiple perspectives of gender, class, religion, and ethnic groups. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 2005 - Women in World History: 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 is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 2015 - 20th Century World History:HI1 (3)

Investigates the major political, social, and economic developments, international relationships, scientific breakthroughs, and cultural trends that have shaped the various global regions and nation-states from 1900 to the present. Emphasizes the interactions of global regions and nation-states. This is a statewide Guaranteed Transfer course in the GT-HI1category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 2020 - The Holocaust and Genocide (3)

Examines the historical preconditions, ideologies, causes, and processes that culminated in the Holocaust in Nazi Germany as well as other genocides around the world in the 20th century. This course analyzes events and what they represent in historical context through a variety of disciplines and methodologies. It differentiates the inter-relationships between perpetrators, victims, and bystanders. The course also evaluates how eyewitness memories, historical research, and media representations all shape our contemporary understanding of these events.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 2075 - Special Topics (1-3)

Focuses on the exploration of current topics, issues and activities related to one or more aspects of history.

HIS 2085 - Independent Studies (0)

Incorporates structured and guided, individualized research that is organized and tailored around the interests and needs of the individual student.

HIS 2105 - Women in U.S. History: HI1 (3)

Examines women's changing roles in American history from the pre-colonial native population to the present. Emphasizes the nature of women's work and the participation of women in the family, political, religious, and cultural activities and in social reform movements. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 2115 - American Indian History: 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 the current conditions. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 2130 - Hist of American West: HI1 (3)

Traces the history of the American West, from the Native American cultures and the frontier experiences of America's earliest, eastern settlers, through the Trans-Mississippi West, across the great exploratory and wagon trails, and up to the present West, be it urban, ranching, reservation, resource management, or industrial. Emphasizes the north and central parts of the West. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 2135 - Colorado History: 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 and mountain men, the gold rush, railroad builders, the cattlemen and farmers, the silver boom, the tourists, and the modern state. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HIS 2145 - US History Since 1945: HI1 (3)

Focuses on the major political, economic, social, and cultural developments that have shaped modern America from 1945 to the present. This is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 094 or equivalent placement scores.

HIS 2200 - History of Latin America: 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 is a statewide Guaranteed Transfer course in the GT-HI1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HNR-Honors Courses

The prerequisite for all HNR courses is the admission to the Honors Program.

HNR 1000 - Honors Seminar: (1)

Develops skills in an interdisciplinary manner, including: self-efficacy, college success, interdisciplinary connections, critical and creative thinking. A primary goal is to develop a sense of community within the class. This course increases awareness of issues relating to diversity and leadership and explores techniques for successful honors academic performance.

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.

HNR 1075 - Special Topics (0-12)

Provides student with a vehicle to pursue in depth exploration of a special topic of interest.

HNR 2002 - Honors Colloquium II: (2)

Continues to develop skills in interdisciplinary scholarly research, writing, and discourse, facilitated by an in-depth study of a major theme. The emphasis is on leading discussions and projects, and integration of diverse information.

HNR 2080 - Internship (0-12)

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

HNR 2089 - Capstone: Honors (0.25-4)

Provides a demonstrated culmination of learning within a given program of study.

HPR-Health Professional Courses

www.rccc.edu/holistic-health

HPR 1001 - Introduction to Health Care (2)

Introduces health sciences with an overview of the five pathways that make up the health science cluster. The course addresses the foundation standards including health maintenance, employability skills, teamwork, healthcare systems, communications, and legal issues in healthcare.

HPR 1008 - Law & Ethics for Health Prof (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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HPR 1011 - CPR for Professionals (0.5)

Meets the requirements 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 this course is basic patient assessment, basic airway management, rescue breathing, AED use and CPR for infant, children and adult patients.

HPR 1017 - Anatomical Kinesiology (3)

Studies the Anatomical Basis of Human Movement.

HPR 1020 - Phlebotomy (4)

Teaches the duties associated with the practice of venipuncture, capillary puncture, and special collection procedures. Students will have experience with quality control, infection control and safety procedures as well as laboratory computer systems. Students successfully completing this course may apply for a National Phlebotomy Registry Examination.

NOTES: Documentation of at least 2 Hepatitis B Immunizations are Required before the start of this course. Proof of Covid Vaccination and A background check/Drug screen (at students own expense) is required prior to Internship.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and HPR 1040. HPR 1040 can also be taken as a corequisite. Corequisite: HPR 1040.

HPR 1025 - Outdoor Emergency Care (4)

Prepares the student without previous first aid training to handle the emergency care problems seen at alpine and nordic ski areas. The knowledge and skills are oriented toward the wilderness setting with special emphasis on ski and snowboard injuries, altitude and cold weather illnesses, wilderness extrications, and the special equipment ski patrollers need for emergency care and transportation in the outdoor environment. This is a National Ski Patrol course.

HPR 1026 - Outdoor Emergency Care Refresh (0.5)

Provides for maintenance of a uniform skill level and act as a means of national recertification for Winter Emergency Care.

HPR 1040 - Comprehensive Medical Terminol (3)

Provides an in-depth study of the structure of medical terms with emphasis on using and combining common prefixes, roots and suffixes. This course includes terms related to major body systems, oncology, and psychiatry as well as clinical laboratory and diagnostic procedures, and imaging, and provides accepted pronunciation of terms and relative use in the healthcare setting.

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 1057 - Contemporary Issues in Elderly (3)

Teaches the student to become familiar with the issues surrounding eldercare today. Issues pertaining to health, wellness, emotional/psychosocial, and financial will be explored.

HPR 1058 - Death & Bereavement in Society (3)

Examines death from the perspectives of the dying individual, the bereaved and the caregivers. The course will focus on sociological, cultural, spiritual, development and psychological aspects of dying and bereavement. It will also include study of various groups and their relationships to death and disposition, funerals and other rites.

HPR 1080 - 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.

NOTE: Also Required prior to documentation of immunizations, Passed criminal background check\drug screen. Internships are full-time (135 hours) Approx. 3.5 weeks. Attendance is required.

Prerequisite: Grade of C or higher in the following courses: HPR 1020 and HPR 1040.

HPR 2011 - ACLS (1)

Presents the required material for ACLS completion. It will cover arrhythmias, medications, therapeutic modalities for life threatening arrhythmias, airway management, and other treatment modalities used in cardiac and respiratory arrest.

Prerequisite: Current basic life-support health care provider card.

HPR 2013 - Pediatric Adv Life Support (1)

Provides students the needed information and skills as required by health care agencies for pediatric emergencies.

HUM-Humanities Courses**HUM 1003 - Intro to Film Art: AH2 (3)**

Studies the relationships among film's stylistic systems, narrative systems and audience reception. Students view, discuss and critically analyze a variety of films which represent a variety of genres and themes. The course incorporates the vocabulary of stylistic systems (for instance, cinematography and editing) and narrative systems (for instance, story structure and character motivation) as both relate to the kinds of meanings a film conveys. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

HUM 1015 - World Mythology: AH2 (3)

Introduces students to a multidisciplinary approach to world mythology. Common themes are illustrated and connected to religion, philosophy, art, literature, music, and contemporary culture. In addition, students will study various ways of interpreting myth. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

HVA-Heating and Air Conditioning Courses**HVA 1002 - Basic Refrigeration (4)**

Introduces the basic theory of refrigeration systems, components, charging, recycling, and evacuation of refrigeration units.

HVA 1005 - Electricity for HVAC/R (4)

Teaches resistance, current, voltage and power in AC and DC circuits; measurements; computations of series and parallel circuits; circuit analysis and troubleshooting with basic test equipment.

HVA 1007 - Safety in the Workplace (2)

Introduces the need for safety in the workplace and the role that OSHA has in helping to prevent and eliminate work-related injuries. Introduces the need for Emergency Action Plans, the proper use of Personal Protective Equipment (PPE) and Hand and Power tool Safety practices. Covers the use of Stairways and Ladders and Electrical Safety. Covers a variety of relevant first aid topics.

HVA 1010 - Fundamentals of Gas Heating (4)

Introduces students to the fundamentals of gas heating. Students work in a classroom and shop environment. Topics include the basics of gas heating systems, operation of gas valves and burners, gas pipe system design, gas piping system code requirements and basic code requirements for heating systems.

HVA 1011 - Piping Skills for HVAC (4)

Studies the different types of tubing and piping materials used in HVAC/R applications. Studies the proper tubing and piping installation methods used in the HVAC/R field. Subjects covered will be the proper cutting and bending procedures including, pipe math and how to make piping offsets. Common types of piping joints will be discussed, including, swaging, flaring, soldering, and brazing. Also covered will be cutting and threading of steel pipe and other alternative mechanical piping connections. Shop projects will include both bench projects and also mock up installation projects.

HVA 1013 - Refrigerant Recovery Training (1)

Explains the laws regarding refrigerant recovery. The course includes hands-on use of recovery equipment. Upon successful completion of this course students will be prepared to take the EPA certification test. Test is offered following the class. Test fee is not included in course fee.

Corequisite: HVA 1002.

HVA 1018 - Customer Soft Skills Training (2)

Introduces the need for outstanding Customer Service Soft Skills. Teaches the student the proper steps that need to be taken to have good customer service skills, that will lead to a lasting relationship with the customer.

HVA 1025 - Building Envelope Analysis I (4)

Introduce the student to what a Building Envelope Analysis is and the importance of analyzing the building envelope and the role that heat transfer plays in that analysis.

HVA 1032 - Air Cond & Refrig Controls (4)

Continues HVA 1005. The course applies the knowledge of basic electricity to controls related to air conditioning and refrigeration equipment. The course also works on reading and drawing schematic and ladder diagrams.

Prerequisite: Grade of C or higher in the following courses: HVA 1002 and HVA 1005 or permission of instructor.

HVA 1034 - Air Conditioning Systems (4)

Studies the basics of air conditioning system design, operation and installation. Students learn how cooling systems can be designed with human comfort and efficient operation in mind. Time is spent in the shop installing components related to these systems.

Prerequisite: Grade of C or higher in the following courses: HVA 1002 and HVA 1005 or permission of instructor.

HVA 1040 - Basic Sheet Metal (4)

Teaches the basic skills required to install duct systems for those entering the HVAC trade. Information covered includes: tools, safety, common materials, installation standards and practices. The course will cover fabrication of transitions and common fittings.

HVA 1041 - Sheet Metal Fabrication (2)

Introduces the basics of shop-based sheet metal tools and hand tools and how they are used to create fittings for residential ducting systems. Safe operation of tools will be stressed. The layout and fabrication of a furnace plenum, a transition, and square and radius elbows will be covered. Other fittings may be covered as time permits.

Prerequisite: Grade of C or higher in the following course: HVA 1040.

HVA 1062 - Heating Controls (4)

Applies the knowledge of Basic Electricity to Controls related to heating equipment. This includes boilers and furnaces with emphasis on ignition and controls related to high efficiency heating equipment. Course work includes reading and drawing ladder and schematic wiring diagrams.

Prerequisite: Grade of C or higher in the following courses: HVA 1002 and HVA 1005 or permission of instructor.

HVA 2006 - Mechanical Codes (4)

Reviews in detail the Uniform Mechanical Code. The course is intended to give those entering the HVAC/R trade as well as those trades people taking certification examinations, a sound knowledge of this code.

HVA 2031 - Pneumatic Controls (4)

Covers pneumatic controls and systems used in controlling commercial and industrial HVAC equipment. The course includes lab experimentation with pneumatic controls, rebuilding of valves and actuators and calibration of various types of controls. Students work with controls from most of the major manufacturers.

Prerequisite: Grade of C or higher in the following courses: HVA 1002, HVA 1005 and HVA 1032 or permission of instructor.

HVA 2033 - Advanced Refrigeration (4)

Builds on the skills acquired in refrigeration fundamentals. The student will have an opportunity to study and to work on rooftop units, ice machines, and commercial reach-in and walk-in coolers

Prerequisite: Grade of C or higher in the following courses: HVA 1002, HVA 1005 and HVA 1032 or permission of instructor.

HVA 2040 - Servicing Forced Air Systems (4)

Covers the operation, repair and maintenance of forced air heating systems. The course studies the different types of furnaces, code requirements, common controls and mechanical problems. This course also explores the A.G.A. approved method of testing furnace heat exchangers. Customer relations and workplace behavior are discussed.

Prerequisite: Grade of C or higher in the following courses: HVA 1002, HVA 1005 and HVA 1032 or permission of instructor.

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: Grade of C or higher in the following courses: HVA 1005 HVA 1010, and HVA 1011 or PLU 1001 and HVA 1062 or permission of instructor.

HVA 2061 - A/C Systems Service and Repair (4)

Emphasizes the service of HVAC systems. Students will develop a preventative maintenance program for various types of equipment, both commercial and residential. Troubleshooting techniques and equipment repair and rebuilding are discussed. Additional time is spent on equipment change outs, upgrading and retrofitting different refrigerants.

Prerequisite: Grade of C or higher in the following courses: HVA1002, HVA 1005, HVA 1013, and HVA 1032 or permission of instructor.

HVA 2063 - Chillers (4)

Introduces the student to chillers and their operating parameters.

Prerequisite: Grade of C or higher in the following courses: HVA 1002, HVA 1005 HVA 1013, and HVA 1032.

HVA 2067 - Radiant Heating Systems (4)

Covers the theory of operation, installation and maintenance of warm water radiant heating systems in a combination of lecture and lab. Different methods of zoning, controls, piping methods, piping types and system components are discussed. Upon successful completion, students are able to design, install, document, maintain and trouble-shoot all conventional residential warm water, radiant panel heating systems.

Prerequisite: Grade of C or higher in the following courses: HVA 1005, HVA 1010, HVA 1011 or PLU 1001, HVA 1062, and HVA 2047 or permission of instructor.

HVA 2068 - Advanced Hydronic Controls (4)

Course takes the operation of hydronic heating systems and allows the student to apply the knowledge of advanced hydronic controls to them. The student must have a solid field background or education in hydronic heating, electricity and heating controls prior to enrollment.

Prerequisite: Grade of C or higher in the following courses: HVA 1010, HVA 1011 or PLU 1001, HVA 1062, HVA 2047, and HVA 2067, or permission of instructor.

HVA 2069 - Indoor Air Quality & Ventilation (4)

Apprises the experienced student of problems associated with indoor air quality and ways to improve the indoor environment. Mechanical Code and other national standards will also be addressed.

HVA 2075 - Special Topics (0.50-6)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

HVA 2080 - Internship (0.50-6)

Gives the student an opportunity to apply their course studies in a specific area.

HVA 2085 - Independent Study (0.50-6)

Work with the instructor on a specific area with specific objectives and a predetermined project completion date.

HWE-Health & Wellness Courses**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 1002 - First Aid & Adult CPR (0.5)

Teaches the recognition and care for breathing and cardiac emergencies for victims 8 years old and up; identify and care for life-threatening bleeding, sudden illness and injuries. American Red Cross certification in Adult CPR and Standard First Aid is available for students meeting those requirements

HWE 1019 - SMT Fitness Instruction (3)

Encompasses a variety of different activities (choreographed or non-choreographed) led by a qualified instructor. Classes may include aerobics (step & floor), mind body (Yoga/Pilates), or specialty (kickboxing, stability ball, senior classes, and arthritis). Class format will focus on preparing students to lead a variety of group exercise classes as a certified fitness instructor with entry level skill set.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HWE 1054 - Nutrition Whole Food Cooking (3)

Encompasses the principles of Human Nutrition and applies the concepts to whole food cooking and disease prevention. Students will learn "hands on" whole food cooking principles and preparation methods for a variety of healthy food choices. Course includes knife and food safety, food costing, vocabulary, food preservation, menu planning and shopping for different dietary restrictions and disease populations. Prevention of chronic disease and obesity through good nutrition and healthy eating are foundations for this course.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores, and HWE 1050. The following course may also be taken as a corequisite: HWE 1050. Corequisite: HWE 1050.

HWE 1061 - Fitness and Wellness (2)

Provides information on fitness and wellness and to serve as a guide to design, implement, and evaluate a complete personal fitness and wellness program. The course integrates the basic components of fitness and wellness in understanding human health in order to achieve well-being. This course offers current information in the health field and provides self-assessments for health risk and wellness behaviors. This includes lifestyle modification, nutrition, weight management, stress management, cardiovascular and cancer risk reduction, exercise and aging, exercise related injury, exercise and the environment, prevention of sexually transmitted diseases, substance abuse (including tobacco, alcohol and other psychoactive drugs), and analysis and interpretation of research publications and web sites in health and wellness.

HWE 1068 - Cert Pers Trainer Prep Course (3)

Provide the student with theoretical knowledge and practical skills in preparation for a nationally recognized personal training certification approved by the Colorado Community College System. These Certifications are limited to the following: ACSM, ACE, NSCA, NCSF, AFAA, and AEA. Upon certification, the student will have the ability to develop and implement exercise programs for healthy populations and/or those individuals with medical clearance to exercise.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

HWE 2060 - Exercise, Nutr. and Body Comp (3)

Discusses the concepts of improved performance in all fitness areas. Emphasis is placed upon updated information associated with nutrition and human performance. Measurement of body composition is used as it correlates to training and diet/exercise programs.

HWE 2062 - Physiology of Exercise (3)

Introduces the student to the physiological responses and adaptations of individuals to exercise as well as the application to sports medicine, rehabilitation and general fitness. The laboratory provides experiences that demonstrate the underlying theoretical constructs that govern physiological responses and adaptations to exercise.

IHP-Integrative Health Professions Courses

www.rccc.edu/integrative-health-professions

General Prerequisite for all IHP courses:

The prerequisite for all IHP courses is a grade of C or higher in CCR 0092 or CCR 0094 or appropriate placement score, or a college degree of AA, AS or higher, or successful completion of ESL 0053 and ESL 0093.

IHP 1000 - Exploring Complementary Health (1)

Explores some of the more widely used alternative/complimentary healing methods. The course will expand upon perspectives on health and provide a basis for conversing in a knowledgeable manner with clients and practitioners about alternative health options.

IHP 1002 - Integrative Health I (1)

Introduces the philosophy, theory, and practice of holistic health and how it integrates with the art and science of caring and healing. A review of the health paradigm and emerging changes seen within health care and medicine will be introduced. The course content will be approached in a holistic manner that endorses stress reduction as well as preventative, nurturing, and reflective activities that are geared towards generating health promotion and optimal wellness.

IHP 1003 - Circle of Healing (1)

Examines different energy methods in order to work as part of a healing group, which uses intuition and group consensus of imagery as vehicles to create a healing environment.

IHP 1005 - Your Heart's Intention (1)

Examines the fundamentals of the law of attraction, the power of words, and the influence of one's belief in self as they connect to mind-body health. Topics in this course include developing intuition, manifesting dreams, choosing appropriate words and practicing intentional meditations; and how each these techniques can affect your heart's intention and impact one's overall sense of well-being.

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 will be emphasized, as well as 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 the personal growth process and in developing a path towards wellness for oneself and as a practitioner with a client. This course provides experiential practice using various journaling techniques that connect their use to various health-related and coaching practices that serve to promote insight into a more balanced state of well-being.

IHP 1011 - Intro to Massage Techniques I (1)

Provides a general history of massage therapy up to modern day. It will emphasize the physiological as well as psychological impact on overall health, injury restoration, and illness prevention. The course will provide a basic overview of musculoskeletal anatomy as it relates to massage therapy. It will include demonstrations of specific hands-on techniques required to complete a full body Swedish massages.

IHP 1015 - Introduction 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 will provide a connection of basic foot anatomy and meridian zone maps to the identification of reflex points on the feet as they relate to organ systems throughout the body.

IHP 1016 - Reflexology of the Hands/Feet (3)

Provides extended anatomy instruction to further assess the physiological and psychological responses of the body to alleviate stress/pain using energy and touch. This course will analyze advanced protocols of this modality and will show how to apply more sophisticated techniques on hands and feet. It will discuss the importance of self-care and review the scope of practice emphasizing necessary recording procedures using client CARE note documentation (C=condition of client; A=action taken; R=response of client; E=evaluation).

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 blocks 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.

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: Grade of C or higher in the following course: IHP 1020 or equivalent courses.

IHP 1022 - Reiki Level III - Mstr Tchr (1)

Provides the necessary training, visual demonstrations and hands-on practicing of mastery energy techniques that will further enhance the ability to channel Reiki energy for healing purposes. The content will synthesize the previous content on the use of Usui Reiki symbols as well as explain the Master symbols and advanced mastery level techniques to perform Reiki attunements and become teachers of Reiki.

Prerequisite: Grade of C or higher in the following course: IHP 1021 or equivalent courses.

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 - Introduction 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 - Introduction 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 and Preserving Organic (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 for preserving food and community resources for enhancing knowledge of gardening as well as for sharing information and products.

IHP 1051 - Intro to Neurolinguistic Prog (1)

Examines Neurolinguistic Programming (NLP) techniques for modifying behavior in achieving self-improvement, self-management, and more effective interpersonal communications. The course introduces characteristics associated with negative attitudes and beliefs that can be changed for self-improvement. Techniques for replacing negative attitudes and beliefs will be practiced to either stop unwanted habits or create desired behavior.

IHP 1052 - Meditation for Health (1)

Introduces the practice of fundamental meditation techniques for quieting the mind, reducing stress, and activating the Mind-Body connection to enhance one's overall health and sense of wellness.

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 Hlth and Winss Coach (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 1075 - Special Topics (0)

Provides student with a vehicle to pursue in depth exploration of a special topic of interest.

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.

Corequisite: IHP 1015 or IHP 1016 or equivalent courses.

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.

IHP 2002 - Integrative Health II (2)

Provides a more comprehensive study of holistic modalities used to strengthen the whole person through the basic theory of Holism. This course further develops the application of holistic health concepts and the body-mind responses. This course will discuss of the importance of the therapeutic relationship in promoting health or recovery from illness.

Prerequisite: Prerequisite or Corequisite: Grade of C or higher in the following courses: IHP 1002 or equivalent courses.

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 Business Practices (2)

Describes the necessary components, utilizing self-assessments, 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.

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: Grade of C or higher in the following courses: IHP 1015 or IHP 1016 or equivalent courses.

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 relatively simple, energetic touch intervention techniques that can be utilized to support health and to facilitate the healing process.

IHP 2021 - Healing Touch Level II (1)

Expands upon Level One knowledge by increasing the depth of study of Healing Touch (HT). The content will focus on advance 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 HT techniques.

Prerequisite: Grade of C or higher in the following courses: IHP 2020 or equivalent courses.

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 HT practitioner's professional well-being will be reviewed.

Prerequisite: Grade of C or higher in the following courses: IHP 2021 or equivalent courses.

IHP 2023 - Jin Shin Self-Care (1)

Explains the experiential modality of Jin Shin Jyutsu as the "Art of the Compassionate Person" that promotes a relatively simple way of restoring harmony to the body by releasing energy congestion, tension, and stress. The value of this modality in balancing and maintenance of physical, mental and emotional health will be emphasized. The course will emphasize how applying this tool for self-care allows first-hand experience of this energy.

IHP 2024 - Jin Shin Level I (2)

Examines 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 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 as well as advising others on how to safely use and properly apply oils/blends.

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: Grade of C or higher in the following courses: IHP 1035 or equivalent courses.

IHP 2040 - Holistic Nutr: Digestive Welns (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.

Prerequisite: Recommend taking HWE 1050 prior to this course.

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.

Prerequisite: Prior yoga course.

IHP 2058 - Adv. 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: Grade of C or higher in the following courses: IHP 1058 or equivalent courses.

IHP 2061 - Traditional Chinese Medicine (3)

Introduces the history, theories, principles, and various modalities of the Traditional Chinese Medicine (TCM) practice. The course will discuss the multifaceted TCM approach to understanding and treating the human body, including herbalism, massage, nutrition, acupuncture, cupping, exercise, and martial arts. An analysis of how TCM views, diagnoses, and treats illness/disease will be explored using ancient materials and current research. The necessary education and training required for careers using TCM will be covered.

IHP 2063 - Mind, Body, Spirit, and Energy (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 2064 - Mind, Body, Spirit, and Energy (3)

Explores the theory, modality practice, and energetic focus behind the mind-body connection in holistic/Eastern thought versus the role of mind-body separation in allopathic/Western thought. The course will review the scientific theory and advantages as well as detriments of Western Medicine. The content will evaluate the benefits and interconnection of mind-body medicine, energy medicine, and spiritual healing towards overall health and healing versus their absence in traditional healthcare.

IHP 2070 - Clinical - Reflexology (2)

Offers the clinical practicum required for the Reflexology program.

Corequisite: Prerequisite or Corequisite: Grade of C or higher in the following courses: IHP 2015 or equivalent courses.

IHP 2075 - Special Topics (1-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest. A specific course description, list of competencies, and topical outline will be developed for each special topics course. This information will be filed in the department and with the Registrar for placement in the curriculum master file.

IHP 2076 - Special Topics (1-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest. A specific course description, list of competencies, and topical outline will be developed for each special topics course. This information will be filed in the department and with the Registrar for placement in the curriculum master file.

IHP 2080 - Internship (1-12)

Meets the individual needs of students of enhanced learning of an integrative health modality or practice. Students will engage in an intensive study or research project under the direction of a qualified instructor.

IHP 2085 - Independent Study (1-12)

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 2087 - Cooperative Education (1-12)

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 (1-12)

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: Grade of C or higher in the following courses: IHP 102 and IHP 202 or equivalent courses. Must have also completed 13 IHP electives before taking this course.

JOU-Journalism Courses

JOU classes are held in the Visual, Audio, and Media Arts department. The prerequisite for all JOU courses: Basic computer skills.

Basic computer skills are defined as basic keyboarding; uploading and downloading files from the Internet and external devices; using the Web for basic research; sending email and attachments; basic file management; the ability to save information to a CD/DVD, flash drive, or external device; burning a CD/DVD; the ability to use the dock or start menu to open applications; create a new folder on the desktop or other location; and open files in an application.

JOU 1002 - Intro to Editing for Media (3)

Focuses on the process of editing articles for publication in newspapers, newsletters, magazines and the Internet. The Associated Press style is emphasized.

JOU 1005 - Introduction to Mass Media: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

JOU 1006 - Media News and Reporting (3)

Introduces newswriting, reporting and interviewing with an emphasis on clarity, accuracy, completeness, timeliness and fairness.

JOU 1014 - TV Production (3)

Covers principles and techniques of television production, as well as the role of the director/producer.

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 storytelling techniques. Students will focus on the way they observe the world around them and on the content and quality of their photographs.

Prerequisite: Grade of C or higher in the following Courses: JOU 1005 or PHO 1021. A digital camera with manual settings is required.

JOU 2006 - Intermediate Newswriting & Editing (3)

Presents how to gather information as an investigative reporter through research of local, state and federal government publications, how to cover police beat and city hall, how our courts and regulatory agencies function, and how to cover other challenges as the environment, religion, science, medical, public safety and business.

Prerequisite: Grade of C or higher in the following courses: JOU 1002 and JOU 1006.

JOU 2015 - Publications Prod & 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 newswriting, editing, design, layout and advertising for newspaper production. Students may be required to work on the college newspaper or other news-oriented publications.

JOU 2025 - New Media (3)

Explores techniques and approaches in the latest delivery methods for internet-based journalism. Students explore digital media outlets such as blogs, audio and video podcasts, e-zines and social networks. Students create journalistic pieces for internet-based media, focusing on best journalistic practices, ethics of internet media, and technology emergence effecting digital journalism. Concepts in video production, photography, writing, sourcing, editing and relevant skills necessary for the citizen journalist are introduced. Students create components for online news dissemination.

Prerequisite: Grade of C or higher in the following courses: MGD 1002 and MGD 1013.

JOU 2031 - Intro to Public Relations (4)

Focuses on public relations and its role for the individual, the non-profit organization, business and government; research methodology, principles and practices necessary to become a public relations practitioner; and media channels best suited to a persuasive appeal or crisis.

JOU 2041 - Feature and Magazine Writing (3)

Studies trade, consumer and technical markets; manuscript development with emphasis on nonfiction; submission techniques; and trends affecting the marketing of manuscripts.

Prerequisite: Grade of C or higher in the following courses: JOU 1002 and JOU 1006.

JOU 2080 - Internship ()

Provides a structured and guided, individualized research that is organized and tailored around the interests and needs of the individual student who may use journalism skills and experiences acquired during previous coursework.

Prerequisite: Department Chair approval required.

JPN-Japanese Courses**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: Grade of C or higher in the following course: JPN 1001 or permission of instructor.

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. Note: The order of the topics and methodology will vary according to individual texts and instructors.

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. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

Prerequisite: Grade of C or higher in the following course: JPN 1011 or permission of instructor.

JPN 2011 - Japanese Language III : AH4 (3)

Continues Foreign Language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the Japanese language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; and JPN 1012 or permission of instructor.

JPN 2012 - Japanese Language IV: AH4 (3)

Continues Japanese Language I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the Japanese language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; and JPN 2011 or permission of instructor.

LAT-Latin Courses**LAT 1011 - Latin I (5)**

Deals with the development of functional proficiency in listening, speaking, reading and writing Latin. Note: The order of the topics and methodology will vary according to individual texts and instructors.

LAT 1012 - Latin II (5)

Continues Latin I in the development of functional proficiency in listening, speaking, reading and writing Latin. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

LAT 2011 - Latin III (3)

Continues Latin I and II in the development of increased functional proficiency in reading, translating and writing Latin, as well as listening and speaking Latin. This course provides the students with an opportunity to examine, compare and contrast language systems and understand the culture and values of the classical world.

LAT 2012 - Latin IV (3)

Continues Latin I, II and III in the development of increased functional proficiency in reading, translating and writing Latin, as well as listening and speaking Latin. This course provides the students with an additional opportunity to examine, compare and contrast language systems and understand the culture and values of the classical world.

LEA-Law Enforcement Academy Courses**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.

Prerequisite: Permission of Program Director.

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.

Prerequisite: Permission of Program Director.

LEA 1003 - Basic Law Enforcement Acad 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.

Prerequisite: Permission of Program Director.

LEA 1004 - Basic Law Enforcement Acad. 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 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.

Prerequisite: Permission of Program Director.

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 Traffic Code, Colorado Children's Code, Liquor Code and controlled substances.

Prerequisite: Permission of Program Director.

LEA 1006 - Arrest Control Techniques (3)

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.

Prerequisite: Permission of Program Director.

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.

Prerequisite: Permission of Program Director.

LEA 1008 - Firearms (3)

Discusses the skills, knowledge and abilities necessary to safely use police firearms. Students will demonstrate skills by firing weapons on a firing range. The student will demonstrate basic safety techniques and will be able to explain the firearms role within the continuum of force.

Prerequisite: Permission of Program Director.

LEA 1009 - Culture & Conflict Resolution (2)

Explores the role culture plays in dispute resolution and ways that gender, race, ethnicity, national origin, age, religion, sexual orientation and language influence conflict resolution.

Prerequisite: Permission of Program Director.

LEA 1010 - Career Management (1)

Introduces the law enforcement candidate to the proper performance standards and best habits and practices necessary to secure and maintain employment as a peace officer.

LEA 1011 - Defensive Weapons (1)

Introduces the law enforcement candidate to the legal and tactical use of defensive weapon systems to include Oleoresin Capsicum (OC) pepper defensive spray and TASER use in law enforcement defensive tactics applications.

LEA 1016 - Civil Liability (3)

Exploration of the origin and jurisdiction of civil action, procedure and responsibility addressing the liability of criminal justice practitioners.

Prerequisite: P.O.S.T. certification.

LEA 1018 - Report Writing (3)

Identifies the areas of concern in regards to proper documentation of police related activities. Exploration of report writing skills, proper structuring of interviews and chronological documentation of events. Incorporates proper sentence structuring, the use of correct terminology and accuracy in written reports.

LEA 1026 - Patrol Procedures (3)

Exploration of an in-depth study of the basic knowledge and skills required of a peace officer to safely and effectively accomplish patrol procedures.

LEA 1030 - Administration of Justice for Reserve Officer (1)

Exploration of the statutory authority by which the student will function as a Colorado Reserve Peace Officer. Student will become familiar with the operations of the criminal justice system, concepts of ethics in policing and the relationship to the Law Enforcement profession, and elements of Colorado statutes necessary to function as a Colorado Reserve Peace Officer.

Prerequisite: P.O.S.T. certification.

LEA 1031 - Basic Law for Reserve Officer (2)

Exploration of the U.S. Constitution, Rules of Evidence, Colorado Criminal Code, Victims Rights, and Legal Liability.

LEA 1067 - Fingerprinting (3)

An in-depth instruction of the interpretation, classification, and presentation in court of the Henry System of classification of fingerprint patterns. Instructor includes the discussion of lifting and preserving fingerprints from crime scenes. The processing of a crime scene using basically powders and a magna brush. The student will be proficient in the Henry System and use all kits and allied equipment in a high level at the completion of the course.

Prerequisite: P.O.S.T. certification.

LEA 1075 - Special Topics (1)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of Program Director.

LEA 1080 - Internship (1-12)

Prerequisite: Permission of Program Director.

LEA 2018 - Drug Investigative Strategies (3)

Exploration of the laws dealing with gambling, prostitution, sex crimes, and narcotics. Allows students to understand the special techniques employed in the detection, suppression, and apprehension of violators. Includes effects of drugs and narcotics, identification of narcotics, and terminology.

Prerequisite: P.O.S.T. certification.

LEA 2019 - Police Intelligence (2)

Focuses on the fundamentals of how law enforcement agencies apply intelligence in police operations and combat organized crime. Explains the structure, training, staffing and security of intelligence units and demonstrates operating guidelines at a command level.

Prerequisite: P.O.S.T. certification.

LEA 2021 - Community Problem Solving (3)

Exploration of community oriented policing and problem solving strategies. Allows the student to understand the development of skills and tools necessary to implement a program. Focuses on handling stress, problem solving, and verbal communication techniques. Examines special problems that affect the police and community including victim's rights, ethics, crime prevention, gangs, ethnic intimidation and child abuse.

Prerequisite: P.O.S.T. certification.

LEA 2022 - Law Enforcement Instructor Development Program (3)

Teaches the fundamentals of classroom instruction. It includes the practice and application of classroom skills that involve the preparation and presentation of law enforcement programs, principles of learning, constructing performance objectives and lesson plans, the use of audio-visual aids, test construction and evaluation, and training liability. This is a P.O.S.T. approved course.

Prerequisite: P.O.S.T. certification.

LEA 2023 - Firearms Instructor Course (1)

Exploration of the understanding and demonstration of safe handling and proper utilization of firearms. The student will demonstrate the safe and proper teaching techniques necessary to instruct others in the safe use of firearms. Demonstrates knowledge in the management of a safe and realistic police firearms training program and the ability to safely and properly control a police firearms range.

Prerequisite: P.O.S.T. certification.

LEA 2024 - Control Tactics Instructor (ACT) (1)

Prepares and certifies law enforcement personnel as PPCT Instructors. Once certified, they are able to teach a program of Arrest Control Tactics.

Prerequisite: P.O.S.T. certification.

LEA 2026 - Field Training Officer Development (2)

Exploration of the topic areas in law enforcement that are unique Field Training Officer (FTO). The instructional content of this program includes: direct supervision, evaluation procedures, individual instruction, and individual on the spot correction.

Prerequisite: P.O.S.T. certification.

LEA 2027 - L.E. Supervisory Training Program (2)

Develops the Law Enforcement Supervisor. It provides an overview of police supervision and gives the student an understanding of the first-line supervisor's role from three perspectives: management expectations, first-line supervisors' concept of the role, and subordinates' expectations. This is a P.O.S.T. approved course.

Prerequisite: P.O.S.T. certification.

LEA 2040 - Criminal Investigations (3)

Introduces investigation methods and procedures from preliminary investigation through the follow-up stages.

LEA 2041 - Security of Specialized Facilities (2)

Exploration of the areas within the security field that require special knowledge, such as airport security, nuclear and atomic site control, clearance control, military and civilian integrated security systems, civil demonstrations, strikes, and riot control. Includes specialized areas of accounting, computer control, foreign trade control, and industrial espionage.

Prerequisite: P.O.S.T. certification.

LEA 2042 - PPCT Recertification Course (ACT) (1)

Updates the police officer on the changes of the law and any updates to the course. It is required that the instructor be a certified PPCT Instructors. Once completed the officer will be endorsed by PPCT for a period of one year.

Prerequisite: PPCT certification.

LEA 2043 - County Sheriff Operations (1)

Exploration of the topic areas in law enforcement that are unique to the County Sheriff's Department. The content of this program includes prisoner transporting, booking procedures, courtroom security, civil process, and duties/responsibilities associated with a County Sheriff's Department as outlined in CRS 30-10-501 through 523 and CRS 30-2-106 and 107.

Prerequisite: P.O.S.T. certification.

LEA 2044 - Detention Skills Refresher (2)

Exploration of the topic areas in law enforcement that are unique to the detention officers. The instructional content of this program includes: prisoner transporting, booking procedures, security in the courtroom, and duties/responsibilities associated with a detention as outlined in CRS 30-10-501 through 523 and CRS 30-2-106 and 107.

Prerequisite: P.O.S.T. certification.

LEA 2046 - Traffic Investigation (3)

Exploration of the skills and concepts necessary to complete an accurate investigation of a traffic collision. Emphasizes traffic management concepts, selective traffic enforcement, and safety issues.

Prerequisite: P.O.S.T. certification.

LEA 2047 - Street Survival Techniques (2)

Exploration of an in-depth study of the basic knowledge and skills required of a peace officer to safely and effectively accomplish the patrol function.

LEA 2060 - Police Photography (3)

Exploration of the current methods and techniques of police photography. Includes the use, nomenclature, and operation of 35mm and 4x4 cameras at simulated crime scenes and traffic accidents. Incorporates the development, printing, and enlargement of photos. Also includes the use and proper operation of digital cameras.

Prerequisite: P.O.S.T. certification.

LIT-Literature Courses

LIT 1015 - Intro to Literature I: AH2 (3)

Introduces students to fiction, poetry, and drama. Emphasizes active and responsive reading. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2002 - World Lit After 1600: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2005 - Race, Ethnicity, Culture: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2011 - Amer Lit to Civil War: AH2 (3)

Provides an overview of American literature from the Native American through the nineteenth century Romantics. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2012 - Amer Lit Aft Civil War: AH2 (3)

Provides an overview of American literature from the mid-nineteenth century to the present. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2021 - British Lit 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2022 - British Lit 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 which reflect and/or critique the social assumptions of the 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2030 - Comics/Graphic Novels (3)

Introduces visual literature in the form of the Graphic Novel or Comic Art. Diverse theoretical approaches will be used to evaluate and analyze texts.

LIT 2035 - Science Fiction (3)

Examines the techniques and issues of science fiction through a close reading a variety of writers in the genre

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2046 - Literature of Women: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2055 - Children`s Literature: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

LIT 2068 - Celtic Literature: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

MAC-Machining Courses

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.

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.

MAC 1005 - Intro to Machining Technology (4)

Introduces the student to the changing era of machining technology, emphasizing terminology, referencing and applications related to manufacturing environments. The fundamental use of bench tools, layout procedures, materials, precision measuring tools, machining processes, drilling and cut-off machines and other machining/manufacturing processes will be stressed. Skill competencies and standards will be identified. Use of the Machinery's Handbook will be strictly required and particular competencies may require performance evaluations.

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.

MAC 1011 - Intermediate Engine Lathe (3)

Teaches students to prepare single point external and internal unified screw threads to a Class 3 fit, generate angles with the compound rest within one degree, ream holes concentric within .001 inches, determine cutting speeds, and perform facing and turning operations.

MAC 1012 - Advanced Engine Lathe (3)

Prepares students to form radius, single-point isometric threads, turn spherical radius, use a radius gauge, and work within .0005 inches tolerance externally.

MAC 1020 - Intro 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.

MAC 1021 - Intermediate Milling Machine (3)

Prepares students to determine hole locations by coordinates and degrees, use a rotary table, use a jig bore to drill holes by the coordinate method, and work within plus or minus .001 inch tolerance.

MAC 1022 - Adv Milling Machine Operations (3)

Prepares students to indicate the head of a vertical mill, bore holes, drill holes at an angle, and work with tolerances of .0008 inches location and diameter.

MAC 1030 - Conventional Lathe Operations (4)

Includes calculation of speeds and feeds on various materials, identification and application of various work holding techniques, tool forming, advanced machining practices and applications, and spindle tooling. Students will learn how to calculate and turn tapers using the compound slide or taper attachment, offset work on a four jaw chuck, turning between centers, boring, grooving, finishing, single point threading, knurling, tool grinding, drilling operations, and reaming.

MAC 1031 - Milling Machines & Operations (4)

Introduces vertical milling machines. The operations and applications will consist of using the machine controls, speeds and feeds, spindles, arbors and adapters cutting tools, tool holders, conventional and climb milling applications simple indexing, fixture alignments, work holding methods. Students will become familiar with set-up applications considering offset boring operations, face milling, plain milling, and precision drilling applications. Students will be required to produce parts to a tolerance of +/- .004in. and perform competencies set by manufacturing standards.

MAC 1041 - Advanced Machining Operations (4)

Provides the student the use of various conventional machine tools used in a machine shop environment. The use of engine lathes, horizontal and vertical milling machines, surface grinders, drill presses, pedestal grinders, power cut-off saws and other machine tools commonly used to produce quality machined parts in today's manufacturing environments. Machining competencies will be stressed and students will be required to produce parts manufactured by local manufacturing companies with the consideration of ISO quality standards.

MAC 1045 - Production Manufacturing (3)

to Familiarizes the student to concepts related to manufacturing environments. Topics will consist of, but not be limited to Material Identification, Shop Floor Management, Just-In Time Manufacturing, Kan-Ban Systems, Statistical Quality Control, Total Quality Management. Various lectures and demonstrations of these processes will be delivered. Students may be required to re-search, explore, and report on particular manufacturing processes or topics.

MAC 1075 - Special Topics (1)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

MAC 2001 - Intro to CNC Turning Operation (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.

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.

MAC 2005 - Intro to CNC Milling Operation (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.

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.

MAC 2007 - CNC Milling Lab (3)

Prepares students to write programs and run parts from both blueprints provided and per individual student designs. Proofing and editing programs, sub-programs, managing cutter compensations, fixture offsets, and overall execution at the machine will be the primary focus.

MAC 2010 - Intro to Swiss Turn Operations (3)

Introduces the theory behind Swiss turn machine operations. Students will learn about the parts of the machine, general maintenance, and machine setup. Students will learn how to operate a dual spindle Swiss turn machine.

MAC 2011 - Swiss Turn Programming I (3)

Expands on operational techniques presented in Introduction to Swiss Turn Operations. Students will design for and program a single spindle machine with live tooling. Students will expand their skills using a Swiss turn machine by learning proper tool selection, feed and speed calculation, turning programming basics, milling programming basics, and variable manipulation.

MAC 2021 - Surface Grinder Setup/Operatn (3)

Teaches students how to identify major parts and accessories of the surface grinder and grind flat, vertical, and angular surfaces to a tolerance of .0002 position and size.

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.

MAC 2041 - CAD CAM 2D Lab (3)

Requires students to produce a variety of lab exercises on robotic machinery in conjunction with MAC 2040. Aspects of tool-paths for contour, drill and pocket will be covered. Chaining geometry, setting parameters, and managing cutter compensations will be addressed in both multi-tool programs and re-machining operations. Coursework will primarily focus on 2D geometry projects.

Corequisite: MAC 2040.

MAC 2045 - CADCAM 3D (3)

Covers both the production and surfacing of three-dimensional geometry in a self-paced setting. Issues will be covered related to the production of wire frames, solids, surfaces, the joining of surfaces, joining of solids, managing construction planes, sweeping, rotating, and controlling parameter settings. A familiarity with Mastercam, CNC programming techniques, and CNC operations is recommended.

MAC 2046 - CADCAM 3D Lab (3)

Requires students to produce a variety of three dimensional lab exercises on robotic machinery in a self-paced format in conjunction with MAC 2045. Coursework will focus primarily on advanced geometry to include developing an understanding of CNC codes related to work offsets, cutter compensations, and tool management within CAD/CAM programs on the milling machine.

Corequisite: MAC 2045.

MAC 2050 - Advanced Inspection Techniques (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.

MAC 2052 - Practical Metallurgy (3)

Offers a study of metallurgical terms and definitions in an effort to understand both the behavior of metals and their service to industry. Characteristics during heating, cooling, shaping, forming, and the stresses related to their mechanical properties are covered. The theory behind the alloys, heat treatment processes, and the impact they have on strength, toughness, hardness, elasticity, ductility, malleability, wear resistance and fatigue resistances is investigated.

MAC 2053 - Wire EDM Operation (3)

Covers the preparation, operation, and maintenance the Computer Numerical Controlled wire Electric Discharge Machine (the CNC wire EDM machine).

MAC 2057 - Wire EDM Programming (3)

Covers how to create a G language program (G-code) for a Computer Numerical Controlled wire Electrical Discharge Machine (CNC wire EDM Machine) using Computer-aided Design and Computer-aided Manufacturing (CAD/CAM) software.

MAC 2060 - 5-Axis Mill Operation (3)

Covers preparation, operation and maintenance of the 5-axis milling machine.

MAC 2061 - 5-Axis Mill Programming (3)

Covers how to create a 5-axis milling machine program using Computer-aided Design and Computer-aided Manufacturing (CAD/CAM) software.

MAC 2066 - Adv Inspection Techniques II (3)

Expands on machining techniques and applications presented in Blueprint Reading, Advanced Inspection Techniques I, and Geometric Dimension & Tolerance. Students will further develop inspection skills.

MAC 2067 - Metrology Maintenance (3)

Focuses on precise measurement and inspection techniques and maintenance of equipment to ensure that machined parts are within required parameters.

MAC 2075 - Special Topics (3)

This course provides students with a vehicle to pursue in depth exploration of special topics of interest.

MAN-Management Courses

The recommended prerequisite for all Management courses is BUS 1015 (p. 158), Introduction to Business.

MAN 1017 - Time Management (1)

Provides a clear sense of purpose for the following: structured goals, overcome barriers, leverage practical strategies, tools, and techniques to develop and implement an effective time management framework.

Prerequisite: BUS 1015 suggested.

MAN 1028 - Human Relation-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.

Prerequisite: BUS 1015 suggested.

MAN 2000 - Human Resource 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, selecting employees, compensation and benefits, and retaining employees.

Prerequisite: BUS 1015 suggested.

MAN 2012 - Negotiation/Conflict Resol (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.

Prerequisite: BUS 1015 suggested.

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 tools managers use to achieve organizational effectiveness.

Prerequisite: BUS 1015 suggested.

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. The 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 a shared vision to motivate and empower employees to manage conflict, to negotiate, and to develop teams.

Prerequisite: BUS 1015 suggested.

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.

Prerequisite: BUS 1015 suggested.

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.

Prerequisite: BUS 1015 suggested.

MAN 2075 - Special Topics (1-3)

Provides students with a vehicle to pursue special topics of interest in business. The content of this course is designed on an as needed basis to provide current, up-to-date information.

Prerequisite: BUS 1015 suggested.

MAN 2080 - Internship (3)

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.

Prerequisite: BUS 1015 suggested.

MAN 2085 - Independent Study (1-3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: Permission of instructor.

MAP-Medical Assisting Professional Courses

MAP 1010 - Medical Office Administration (4)

Introduces the administrative duties specifically used in medical offices.

NOTE: This is a 7.5-week Course that needs to be completed prior to MAP 1020.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

MAP 1020 - Medical Office Financial Mgmt (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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAP 1010. Prerequisite or corequisite HPR 1040. Corequisite: HPR 1040.

MAP 1038 - 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.

MAP 1040 - 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.

MAP 1050 - Pharmacology- Medical Assts (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.

Prerequisite: BIO 1006 (or BIO 2101 and BIO 2102), HPR 1040, MAT 0250 or higher (or MAT 1240 or higher for AAS degree), MAP 1020.

MAP 1083 - Medical Assistant Internship (5)

Provides supervised placement in contracted facility for guided experience in application of knowledge and skill acquired in the classroom. The student assists with a variety of business and clinical procedures. Positions are non-paid. Student must have permission by program coordinator to begin internship.

NOTE: Internships are non-paid, full time (225 hours). Attendance is required for program completion.

Prerequisite: Successful completion of Medical Assisting program requirements with a grade of C or higher and all competencies passed. Students must have a completed background check, drug screen, health check, all immunizations, a CPR card, and permission of internship coordinator to begin internship.

MAR-Marketing Courses

MAR 1006 - Marketing Your Image (3)

Teaches students how to market themselves to prospective employers, clients, professional groups, and audiences of all types. Major emphasis will be placed on skills used to gain employment (resumes, interviewing, and professional appearance) and on skills used to achieve continued personal success (professional behavior and attitude). The course will include at least one simulated interview.

Prerequisite: BUS 1015 recommended.

MAR 1055 - Social Media for 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 businesses and the individual consumer.

Prerequisite: Grade of C or higher in the following course: BUS 1015 recommended.

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.

Prerequisite: Grade of C or higher in the following course: BUS 1015.

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.

Prerequisite: Grade of C or higher in the following course: BUS 1015 recommended.

MAR 2055 - Digital Marketing (3)

Explores the digital marketing environment from both a consumer and business perspective. This course provides an overview of various online business models and delves into digital advertising and social media marketing techniques and technologies. This course applies research and strategic marketing techniques in the digital marketplace to improve customer relationship management.

MAT-Math Courses

MAT 0240 - Math for Liberal Arts Support (2)

Supports skill development necessary for success within Math for Liberal Arts. Students that do not place directly into MAT 1240 are required to co-enroll in this course.

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.

Prerequisite: Appropriate Math placement exam scores.

MAT 0260 - Intro to Statistics Support (2)

Supports skill development necessary for success within Introduction to Statistics. Students that do not place directly into MAT 1260 are required to co-enroll in this course.

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 MAT 1320 Finite Math.

Prerequisite: Grade of C or higher in the following course: MAT 0250 or equivalent placement scores.

MAT 1140 - Career Math (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: Appropriate Math placement exam scores.

MAT 1220 - Integrated Math I: MA1 (3)

Engages students in the concepts underlying elementary level 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: Grade of C or higher in the following course: MAT 0250 or equivalent placement scores.

MAT 1230 - Integrated Math II: MA1 (3)

Engages students in the concepts underlying elementary level 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: Grade of C or higher in the following course: MAT 0250 or equivalent placement scores.

MAT 1240 - Math for Liberal Arts: 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. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: Co-requisite enrollment in MAT 0240 support course or Grade of C or higher in the following course(s): MAT 0250 or equivalent placement scores.

MAT 1260 - Intro to Statistics: 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. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: Co-requisite enrollment in MAT 0260 support course or Grade of C or higher in the following course(s): MAT 0250 or equivalent placement scores.

MAT 1320 - Finite Mathematics: 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.

MAT 1340 - College Algebra: 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. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: Grade of C or higher in the following course(s): MAT 0300 or equivalent placement scores.

MAT 1400 - Survey of Calculus: 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. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: Grade of C or higher in the following course(s): MAT 1320 or MAT 1340, or equivalent placement scores.

MAT 1420 - College Trigonometry: 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. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: Grade of C or higher in the following course(s): MAT 1340 or equivalent placement scores.

MAT 1440 - Pre-Calculus: 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. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: Grade of C or higher in the following course: MAT 1340 or by permission of the Math department chair.

MAT 2075 - Special Topics (1-4)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

MAT 2080 - Internship (6)

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 instructor.

MAT 2085 - Independent Study (1-3)

Provides an opportunity for the highly-motivated student to engage in intensive study and research on a specified topic under direction of a faculty member

Prerequisite: Permission of instructor.

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. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: Grade of C or higher in the following course(s): MAT 1340 and MAT 1420 or MAT 1440 or equivalent placement scores.

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: Grade of C or higher in the following course(s): MAT 2410 or equivalent placement scores.

MAT 2431 - Calculus III/Engineer App: GT-MA1 (5)

Focuses on 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. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: Grade of C or higher in the following course(s): MAT 2420 or equivalent placement scores.

MAT 2500 - Intro to Proof and Reasoning (3)

Introduces logic, mathematical writing, and formal mathematical proofs. This course includes techniques of proofs, quantifiers, sets, functions, and relations.

Prerequisite: Grade of C or higher in the following courses: MAT 2420.

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: Grade of C or higher in the following courses: MAT 2431.

MAT 2561 - Differential Equations with Engineering Applications: GT-MA1 (4)

Introduces ordinary differential equations. Topics include first, second, and higher order differential equations, series methods, approximations, systems of differential equations, and Laplace transforms with an additional emphasis on engineering applications and problem solving. Appropriate technology related to the mathematical field may be used as a component of the course. This is a statewide Guaranteed Transfer course in the GT-MA1 category.

Prerequisite: Grade of C or higher in the following course(s): MAT 2431 or equivalent placement scores.

MET-Meteorology Courses

MET 1050 - Gen Meteorology w/Lab: 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. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores; and MAT 0250 or equivalent placement scores.

MET 1051 - Intro to Climatology (3)

Introduces the physical mechanisms responsible for spatial and temporal variability in Earth's climate and the human-climate relationship. This course develops a scientific understanding of the physical aspects of Earth's climate system, climate system dynamics, and factors that influence climate change. The course explores the global balance of energy and transfer of radiation in the atmosphere, major climatic controls, classifications and comparisons of major types. Current issues such as global warming and El Niño are covered.

MGD-Multimedia Graphic Design Courses

Prerequisite for all MGD courses: basic computer skills.

Basic computer skills are defined as basic keyboarding; uploading and downloading files from the Internet and external devices; using the Web for basic research; sending email and attachments; basic file management; the ability to save information to a flash drive, or external device; the ability to use the dock or start menu to open applications; create a new folder on the desktop or other location; and open files in an application. Students without these skills are required to take MGD 101 Introduction to Computer Graphics either concurrently or prior to taking other courses in the Visual, Audio, & Media Arts department. If MGD 101 Introduction to Computer Graphics is not a requirement for your degree plan, it can be used as an elective.

MGD 1001 - Intro to Computer Graphics (3)

Introduces the student to the computer system and software used to develop graphics. The student will learn the hardware and software components for publication and multimedia production through execution in various vector, raster, page layout and multimedia programs. Students will be introduced to career opportunities within graphics fields.

Prerequisite: Basic computer skills are needed for success in this course.

MGD 1002 - Introduction To Multimedia (3)

Introduces the basic components of multimedia: text, graphics, animation, sound, and video. Students gain an introductory knowledge of various multimedia and design software programs. Students gain hands-on, technical, conceptual and aesthetic experience pertaining to the creation of multi-dimensional design and time-based media via an array of projects and demonstrations. Students will be introduced to career opportunities within multimedia fields.

Prerequisite: Basic computer skills are needed for success in this course.

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.

Prerequisite: Basic computer skills are needed for success in this course. Corequisite: MGD 1064.

MGD 1006 - Creativity and Visual Thinking (3)

Introduces the visual thinking skills necessary to understand and use the creative process, develop innovative concepts and forms, and to produce and analyze creative works. The underlying components of creative thinking, the creative process, and the creative economy are of primary concern in this class. This class is about concept development and sketching.

MGD 1009 - Design & Color (3)

Covers the design process and creative problem solving. Design and color theories, fundamentals, styles, stages area applied to workups, finished art, and presentations. Emphasis will be online, form, composition, and continuity.

Prerequisite: Grade C or higher in the following course: MGD 1011 or MGD 1012.

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.

Prerequisite: Basic computer skills are needed for success in this course.

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.

Prerequisite: Basic computer skills are needed for success in this course.

MGD 1013 - Adobe InDesign (3)

Introduces students to InDesign, a page layout program which integrates seamlessly with other Adobe design programs. InDesign delivers creative freedom and productivity to DTP. Class discussions and independent projects supplement hands-on classroom work.

Prerequisite: Grade of C or higher in the following courses: JOU 1005, MGD 1011, or MGD 1012, or PHO 1062.

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.

Prerequisite: Grade of C or higher in the following course: MGD 1012.

MGD 1018 - Digital Color Theory (3)

Covers color theory as it relates to multimedia. The psychology of color is taught as well as how to effectively design with color. Students learn how to correct color photographs and create color separations. Color scanning technology is also covered.

Prerequisite: Grade of C or higher in the following courses: MGD 1011 or MGD 1012.

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.

Prerequisite: Basic computer skills are needed for success in this course.

MGD 1021 - Painter for Digital Media (3)

Teaches students how to work with an illustration and paint software application called Painter. Color and relationships, repeat patterns, animation and digitization are among the topics covered in the course as students explore the possibilities of visual art using computers. Assigned projects cover a wide range of visual approaches. Painter provides an extra competitive edge for students.

Prerequisite: Grade of C or higher in the following course: MGD 1011.

MGD 1022 - Sculpting for Digital Media (3)

Introduces students to conceptualization of surface coloration, painting and manipulation of 3D objects and environments. Students will construct sculptures using organic, inorganic, abstract, and realistic subject matter. Operating a 3D scanner, students will digitize a sculpture and bring the electronic file into a computer animation application for manipulation.

Prerequisite: Grade of C or higher in the following course: MGD 2055.

MGD 1025 - 3D Modeling for Gaming: (3)

Introduces basic 3D modeling and rendering features of a specific 3D modeling software. Students will understand 3D geometry, model management, creating materials, material editor effects, beginning photo-realistic rendering, project management, basic rendering concepts and archiving projects. Students will understand how to use modeling translators, file formats, and conversion applications to move models from the modeling application for use in a gaming application, gaming engine or gaming environment.

Prerequisite: Grade of C or higher in the following course: MGD 1055

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: Grade of C or higher in the following courses: MGD 1011 or MGD 1012 or MGD 1013.

MGD 1041 - Web Design I (3)

Introduces web site planning, design and creation using industry-standards-based web site development tools. Screen-based color theory, web aesthetics, use of graphics editors and intuitive interface design are explored.

Prerequisite: Grade of C or higher in the following course: MGD 1011.

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: Grade of C or higher in the following course: MGD 1055.

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 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.

Prerequisite: Grade of C or higher in the following course: MGD 1011 or MGD 1012.

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.

Prerequisite: Basic computer skills.

MGD 1055 - 3D Modeling I (3)

Introduces 3D Modeling software with an emphasis on modeling techniques for setting up scenes with texture maps and lighting. The course also covers how to import models from other programs.

Prerequisite: Basic computer skills.

MGD 1058 - Introduction to UI/UX (3)

This course emphasizes the creation of solutions for suggested user tasks and the development of design patterns used in contemporary apps and websites.

Corequisite or Prerequisite: MGD 1012.

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.

Prerequisite: Basic computer skills are needed for success in this course.

MGD 1064 - Digital Video Editing I (3)

Introduces to digital non-linear video editing. Students will capture, compress, edit, and manipulate video images using a personal computer. Assembly techniques including media management, editing tools, titles, and motion control; transitions and filters, and special effects are explored.

Prerequisite: Basic computer skills are needed for success in this course.

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.

Prerequisite: Grade of C or higher in the following courses: MGD 1011 or MGD 1012 or MGD 1064.

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 1076 - Special Topics (3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

MGD 2002 - Point of Purch 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: Grade of C or higher in the following courses: MGD 1011 and 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: Grade of C or higher in the following course: 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: Grade of C or higher in the following course: 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: Grade of C or higher in the following course: MGD 1012.

MGD 2013 - Electronic Prepress (3)

Explores in detail the electronic prepress process. Students examine steps for preparing a digital file for trapping, output considerations and proofing techniques. Creating effective electronic designs and efficient use of today's software programs are also covered.

Prerequisite: Grade of C or higher in the following courses: MGD 1011 or MGD 1012, and MGD 1013.

MGD 2019 - Maya II (3)

Explores in-depth Maya's animation techniques. Also, the student will be exposed to rigging characters for animation.

MGD 2020 - Adv. Character Rigging (3)

Explores advanced character rigging features of a specific 3D modeling and animation software in depth. Students will understand working with joints, forward kinematic (FK) and inverse kinematic (IK) blending and adding controls. Students create spines using nested constraints and expressions to subdivide vertebra poses (Isner Spines). Students create spine inverse kinematic curves, rig body movements and characteristics, blending specific joints or movement of bone using FK, IK or Isner Spines, pivots, switching and bonesets. Students create facial control systems based on phonemes (visual unit of sound in spoken language), morphing, and creation of eye movement. Students create muscle systems, bind and paint skin, and test a final animated character.

Prerequisite: Grade of C or higher in the following course: MGD 2055

MGD 2033 - Graphic Design II (3)

Continues instruction in idea development for advanced graphic design.

Prerequisite: Grade of C or higher in the following course: MGD 1033.

MGD 2041 - Web Design II (3)

Expands on previously learned fundamentals of HTML introducing cascading style sheets, DHTML, Java Scripts and CGI forms. Color usage and interface design principles are emphasized in this course. In this course we'll examine Web sites that employ more complex structures, optimal site architecture and navigation necessary for larger and more complex sites.

Prerequisite: Grade of C or higher in the following course: MGD 1041.

MGD 2042 - Web Architecture: Open Source (3)

Provides an overview of current open source tools used in the design industry for designing and implementing Web architecture. Course content changes with trends in the industry. Topics may include current content management platforms such as WordPress and Drupal, how to identifying web scripting languages, and an overview of open source programming such as PHP and MySQL

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 web sites. Web site justification of motion graphics will be stressed, appraised and weighed.

MGD 2044 - Integrated Multimedia Dev (3)

Plans and produces content for a single large-scale video/multimedia project, which simulates 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: Grade of C or higher in the following courses: MGD 1013 or MGD 2004.

MGD 2052 - Game Design for Mobile Devices (3)

Introduces game design as it relates to mobile and handheld gaming device platforms. Students explore game design specific to the mobile/handheld platform from conceptual development and functionality through the production of a mobile or handheld gaming prototype. Students will examine character/object registration, tweening, inking and specific issues concerning game design for handheld and mobile devices to design real time game objects, levels, characters and environments. Storytelling and visual metaphor development are emphasized.

Prerequisite: Grade of C or higher in the following course: MGD 1067.

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: Grade of C or higher in the following course: MGD 1053.

MGD 2055 - 3D Modeling II (3)

Examines 3D modeling software programs with an emphasis on organic modeling techniques and animation for setting up scenes with advanced procedural textural maps and lighting.

Prerequisite: Grade of C or higher in the following course: MGD 1055.

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: Grade of C or higher in the following course: MGD 2020.

MGD 2058 - User Experience/User Interface Design (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.

Prerequisite: Grade of C or higher in the following course: MGD 1058.

MGD 2063 - Sound Design II (3)

Focuses on the application of sound with various multimedia software applications. Principles and techniques include MIDI orchestration and sequencing, digital multitrack recording and production, working with musicians and other talent, sound effects layering, integrated audio system production, and advanced audio mixing/sweetening. The student will explore synchronization techniques of audio with moving pictures, graphics, and animation.

Prerequisite: Grade of C or higher in the following course: MGD 1063.

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: Grade of C or higher in the following course: MGD 1064.

MGD 2065 - After Effects II (3)

Provides advanced skills and techniques for creating digital motion graphics. The course covers relevant tools and techniques as well as industry standards, specialized techniques, and additional tools and resources.

Prerequisite: Grade of C or higher in the following course: MGD 1065.

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: Grade of C or higher in the following course: 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.

Prerequisite: Recommended to be taken in 3rd or 4th semester or Department Chair Approval.

MGD 2069 - Multimedia Design and Production (3)

Advanced students will develop indepth multimedia training utilizing specific multimedia development software. Students will research and design a multimedia education product. An authoring application will then be used to develop and distribute a working program or instructional package to one or more forms of media distribution. Current industry trends and preferences will dictate which software will be covered in each course section.

MGD 2075 - Special Topics (3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

MGD 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.

Prerequisite: Approval of department chair.

MGD 2085 - Independent Study (1-3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

Prerequisite: Approval of department chair.

MGD 2089 - Capstone (3)

A demonstrated culmination of learning within a given program of study.

Prerequisite: Last Semester of degree or certificate or Department Chair Approval.

MOT-Medical Office Technology Courses

MOT 1036 - Intro to Clinical Skills (3)

Provides hands on experience with the basic clinical skills required for assisting with patient care in an ambulatory setting.

Prerequisite: Grade of C or higher in the following courses: HPR 1040, BIO 1006 (or BIO 2101 and BIO 2102), MAP 1010, and MAP 1020. Corequisite: Corequisite enrollment in HPR 1040, BIO 1006 (or BIO 2101 and BIO 2102), MAP 1010, and MAP 1020.

MOT 1040 - Insurance Billing and Coding (3)

Introduces outpatient coding services performed (CPT codes) Current Procedural Terminology correlating the diagnosis or signs & symptoms (ICD codes) International Classification of Diseases, establishing medical necessity required for third-party reimbursement.

MOT 1081 - Administrative Internship (2)

Provides supervised placement in contracted facility for guided experience in the psychomotor, cognitive and affective learning domains acquired in an educational program.

Prerequisite: Successful completion of Medical Office program requirements with a grade of C or higher in all core classes and all competencies passed. Student must have completed the background check, drug screen, and have permission of internship coordinator to begin internship.

MOT 1082 - Internship: Clinical (3)

Provides supervised placement in contracted facility for guided experience in the psychomotor, cognitive and affective learning domains acquired in an educational program.

NOTE: Internships are non-paid-full time (135 hours) Attendance is required for program completion.

Prerequisite: Successful completion of M.A. program requirements with a grade of C or higher in classes and all competencies passed. Students must have a completed background check, drug screen, health check, all immunizations, a CPR card, and permission of internship coordinator to begin internship.

MOT 1084 - Billing Specialist Internship (3)

Provides supervised placement in a contracted facility for guided experience and application of knowledge and skill acquired in the classroom. The student assists with a variety of business and billing procedures.

NOTE: Capstone class MOT 2089 can be substituted for Internship ONLY if a site is unavailable and is required for completion of Program.

Prerequisite: Successful completion of Medical Billing program requirements with a grade of C or higher in classes and all competencies passed. Students must have a completed background check, drug screen, health check, and permission of internship coordinator to begin internship. Internship site availability may be limited thus limiting availability for students to take this course.

MOT 2040 - Adv Insurance Billing/Coding (3)

Prepares the student to code correctly to optimize reimbursements for a full range of medical services by applying data to claim forms using official coding guidelines to eliminate insurance fraud and abuse.

Prerequisite: Grade of C or higher in the following courses: HPR 1040, MAP 1020, and BIO 1006 (or BIO 2101 and BIO 2102). These courses can also be taken as corequisites. Corequisite: HPR 1040, MAP 1020, and BIO 1006 (or BIO 2101 and BIO 2102). These courses can also be taken as a prerequisite.

MOT 2089 - Capstone (2)

Emphasizes a synthesis of the information and skills that students learned throughout their medical office technology classes.

NOTE: **Only available when Internship site for MOT1084 are Unavailable.

Prerequisite: Successful completion of the Medical Billing and Coding Program requirements with a grade of C or higher in classes and permission of the department chair. This course is the final course for the Medical Billing and Coding program.

MST-Massage Therapy Courses

MST 1011 - Massage Therapy Fundamentals (4)

Introduces theory and techniques of therapeutic massage, including understanding of physiological benefits of massage as well as proper body mechanics and appropriate draping. Focuses on basic strokes of Swedish massage. Students also learn techniques of seated massage.

Prerequisite: Grade of C or higher in the following courses: BIO 1006, HPR 1040, and HHP 116.

MST 1013 - Professional Massage (3)

Continues the study of Integrative Therapeutic Massage techniques with emphasis on assessing and meeting client's needs. Students give massage in supervised in-class clinicals, applying appropriate therapeutic intervention.

MST 1078 - Seminar (3)

Provides students with an experiential learning opportunity.

Prerequisite: Grade of C or higher in the following course: MST 1013.

MST 1084 - Clinical Massage (2)

Applies skills in a clinical setting. Focuses on improvement of massage therapy skills, ethics, and communication.

Prerequisite: Grade of C or higher in the following courses: MST 1013.

MST 2016 - Pathology for Massage Therapy (3)

Focuses on basic knowledge of disease and injury to assist the massage therapist to promote healing, ease pain and discomfort, and avoid complications during therapy. With a broad perspective of pathology and specific pathophysiology of diseases contributing to the need for massage therapy, this course provides the foundational science for safe practice.

MST 2084 - Clinical Massage (2)

Provides an application of massage therapy skills in a clinical setting. This course focuses on improvement of techniques, communication with clients and other health professionals as well as documentation of massage sessions.

Prerequisite: Grade of C or higher in the following course: MST 1084.

MUS-Music Courses

MUS 1000 - Music Theory Fundamentals I (3)

Introduces the basics of music theory. Course designed to help the beginning music student, or those students with limited background in music theory, study the basic elements of music. Topics include notation, rhythm, scales, key signatures, intervals, chords, beginning level melodic and rhythm dictation, ear-training and sight singing skills.

MUS 1005 - Intro Comp Music Applications (3)

Introduces the use of computers in the music industry. Explores current use of MIDI instrument, MIDI sequencing, MIDI editing, audio editing, notation software, and set-up of Digital Audio Workstation. No prerequisites.

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. You will explore the common factors in all styles of songwriting, and use them to bring out creative song ideas whether you have written songs before or have just always wanted to see if you could. A basic knowledge of music reading for any instrument and elementary music theory is recommended, but not required.

MUS 1008 - Principles of Acoustics (3)

Provides students with simplified acoustic and psychoacoustic concepts to promote an intuitive understanding of sound, its relation to and interaction with physical environments, and the role of sensory perception in shaping the way humans hear.

MUS 1010 - Music Theory I (3)

Presents music fundamentals, diatonic four-part harmony, analysis, ear training, and keyboard harmony. For music majors transferring to a 4-year program.

MUS 1012 - Ear Training/Sightsing 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.

Prerequisite: Grade of C or higher in the following course: MUS 1010. Can also take MUS1010 as a corequisite.

MUS 1020 - Music Appreciation: AH1 (3)

Covers the basic materials of music, musical forms, media, genres and musical periods. Emphasizes the development of tools for intelligent listening and appreciation. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

MUS 1021 - Music Hist MdvI-Classical: AH1 (3)

Studies the various periods of music history with regard to the composers, esthetics, forms, and genres of each period. Considers music from the Middle Ages through the Classical period. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 092 or CCR 094 or equivalent placement scores.

MUS 1022 - Music Hist Romantic-Prsnt: AH1 (3)

Studies the various periods of music history with regard to the composers, aesthetics, forms, and genres of each period. Considers music from the early Romantic period to the present. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

MUS 1023 - Survey of World Music: AH1 (3)

Provides an overview of non-Western music from around the world; provides basic listening skills and the historical/cultural context for a variety of world music styles to enable an understanding and appreciation of non-Western musical expression. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092, CCR 0094, or equivalent test scores.

MUS 1025 - History of Jazz: AH1 (3)

Provides a survey of the basic materials of music and the forms, media, genres, historical, and cultural style periods of jazz. It emphasizes the development of tools for intelligent listening and appreciation. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092, CCR 0094, or equivalent test scores.

MUS 1026 - History of Rock and Pop (3)

Provides a survey of basic materials of music, musical forms, media, genres, and musical periods of Rock and Pop music. It emphasizes the development of tools for intelligent listening and appreciation. There is no pre-requisite.

MUS 1027 - Music in Film (3)

Provides an overview of cinema music from the origins of film to the present. This course covers basic listening skills, basics of how music is used in film, and a historical/cultural context for Western and world cinematic styles to enable an understanding and appreciation of musical expression in film.

MUS 1031 - Music Class I: (specify) (2)

Applies the fundamentals of music to the voice or specific musical instruments. This course also introduces basic techniques, repertoire, and sight-reading. First year, first term.

MUS 1041 - Private Instruction: (specify) (1)

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. First year, first term.

MUS 1042 - Private Instruction: (specify) (1)

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. First year, second term.

Prerequisite: Grade of C or higher in the following courses: MUS 1041 in same instrument.

MUS 1043 - Private Instruction: (specify) (1)

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. First year, third term.

Prerequisite: Grade of C or higher in the following courses: MUS 1042 in same instrument.

MUS 1051 - Ensemble I (1)

First year, first term. Rehearses and performs various types of musical literature.

MUS 1052 - Ensemble II (1)

Rehearses and performs various types of musical literature. First year, second term.

Prerequisite: Grade of C or higher in the following courses: MUS 1051.

MUS 1053 - Ensemble III (1)

Rehearses and performs various types of musical literature. First year, third term.

Prerequisite: Grade of C or higher in the following courses: MUS 1052.

MUS 1061 - Computer Music Applications I (3)

Introduces students to the Digital Audio Workstation, current practices with MIDI instruments, MIDI sequencing, MIDI editing, music notation programs.

Prerequisite: Recommended: MUS 1005.

MUS 1063 - Music Audio Pro. I: (3)

Designed to give music majors and students with a strong interest in music a basic understanding of the Music Production process. This includes the basic knowledge of audio/music production, the fundamentals of sound and microphone, digital and analog technology, recording, and mixing.

MUS 1065 - MIDI I (2)

Considers the language of MIDI, computer skills necessary to learn music software applications, and the process of design and set-up of a music technology workstation. Project-oriented course covers the uses of computers in the music profession. Course projects provide instruction in basic computer skills, music sequencing and notation software skills, the language of MIDI, and operation of synthesizers.

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 1075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Permission of instructor.

MUS 1078 - Seminar/Workshop (0)

Provides students with an experiential learning experience.

MUS 1084 - Internship (0)

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 the instructor.

MUS 2041 - Private Instruction: (specify) (1)

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, first term.

Prerequisite: Grade of C or higher in the following courses: MUS 1042 or MUS 1043 in same instrument.

MUS 2042 - Private Instruction: (specify) (1)

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.

Prerequisite: Grade of C or higher in the following courses: MUS 2041 in same instrument.

MUS 2043 - Private Instruction: (specify) (1)

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.

Prerequisite: Grade of C or higher in the following courses: MUS 2042 in same instrument.

MUS 2044 - Private Instruction: (specify) (1)

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.

Prerequisite: Grade of C or higher in the following courses: MUS 2042 or MUS 2043 in same instrument.

MUS 2051 - Ensemble I (1)

Rehearses and performs various types of musical literature. Second year, first term.

Prerequisite: Grade of C or higher in the following courses: MUS 1052 or 1053.

MUS 2052 - Ensemble II (1)

Rehearses and performs various types of musical literature. Second year, second term.

Prerequisite: Grade of C or higher in the following courses: MUS 2051.

MUS 2053 - Ensemble III (1)

Rehearses and performs various types of musical literature. Second year, third term.

Prerequisite: Grade of C or higher in the following courses: MUS 2052.

MUS 2061 - Adv 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.

Prerequisite: Grade of C or higher in the following courses: MUS 1061 or permission of instructor.

MUS 2063 - Music Publishing (3)

Provides a detailed overview of the fundamentals of music publishing and licensing. Course explores the managing and monetizing of intellectual property, industry cash flow, exclusive bundle of copyrights, exploitation of rights, rights and licensing organizations, national and international licensing, song ownership, song placement, pitching songs, and maximizing royalties.

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 2066 - Advanced MIDI (2)

Continues the study of MIDI. This course examines unassigned control change messages, explore parameter mapping, and employ real-time hardware and automated software control of extended synthesizer parameters. MIDI patch change messages, system real-time messages, and system exclusive messages are used for recall, synchronization, and offline backup of synthesizer parameters. Real-world synchronization scenarios are explored.

Prerequisite: Grade of C or higher in the following courses: MUS 1065.

MUS 2068 - Audio Post Production II (3)

Explores the steps in audio production following editing and mixing. Special attention will be paid to final equalization, audio level compression, multi-band audio compression, and brick wall limiting. Audio mastering is explored from an historic and practical perspective. Dithering, compression, and optimization for specific media types will also be discussed.

Prerequisite: Grade of C or higher in the following courses: MUS 1068.

MUS 2078 - Seminar/Workshop (0)

Provides students with an experiential learning experience.

MUS 2084 - Internship (0)

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 instructor.

MUS 2089 - Capstone (0-12)

Provides a demonstrated culmination of learning within a given program of study.

Prerequisite: Grade of C or higher in the following courses: MUS 2061 or MGD 2063.

MUS 275 - Special Topics (0)

Covers specific topics in music. This course is offered as needed for credit appropriate to the topic and each offering includes a description of the topic(s).

Prerequisite: Permission of instructor.

NAT-Nail Technician Courses

NAT 1008 - Intro Manicure/Ped/Arti Nails (3)

Provides a basic introduction into the proper use of implements used in manicures, pedicures and artificial nails. Theory and practical application of proper set-up, safety, sanitation, nail shapes, anatomy, product knowledge and terminology dealing with manicures, pedicures and artificial nails is covered. Training is done in a classroom or lab setting using models or other techniques.

NAT 1010 - Intro to Nail Care (3)

This course covers the proper use of implements used in manicures and pedicures. Theory and practical application of proper set-up, safety, sanitation, nail shapes, anatomy, product knowledge and terminology dealing with manicures and pedicures is covered. Training is done in a classroom or lab setting using models or other techniques.

NAT 1011 - Inter I Nail Care (2)

This course covers theory and practical application dealing with different types of manicures, pedicures, nail art, and massage techniques. Theory and practical application of procedures, products, nail shapes, and maintenance of natural nails is covered. Students learn to recognize different nail disorders and their proper treatment. Training is done in a specialized class or in supervised salon (clinical) setting, using models or customer service. Proper sanitation and sterilization as it pertains to all aspects of manicures, pedicures, and nail art is taught.

NAT 1058 - Inter Mani/Pedi/Arti Nails (2)

Presents theory and practical application dealing with different types of manicures, pedicures and massage techniques. Theory and practical application of procedures, products, nail shapes and maintenance of artificial nails is covered. Students learn to recognize different nail disorders and their proper treatment. Training is done in a specialized class or in supervised salon (clinical) setting, using models or customer service.

NAT 1059 - Inter Mani/Pedi/Arti Nails II (2)

Presents theory and practical application dealing with different types of manicures, pedicures and massage techniques. Theory and practical application of procedures, products, nail shapes and maintenance of artificial nails is covered. Students learn to recognize different nail disorders and their proper treatment. Training is done in a specialized class or in supervised salon (clinical) setting, using models or customer service.

NAT 2008 - Adv Mani/Pedi/Arti Nails (4)

Provides advanced theory and practical application of manicures, pedicures and nail art techniques. Theory and advanced practical techniques of silk wraps, tip overlays, acrylics and product knowledge to ready the student for employment is presented. Instruction is provided in specialized classes or in supervised salon (clinical) setting using models or customer service. Student preparation for state board licensing examination pertaining to manicures and pedicures is covered.

NAT 2010 - Advanced Nail Care (2)

This course covers advanced theory and practical application dealing with different types of manicures, pedicures, massage techniques, and nail art. Topics included in this course are: practical application of procedures, products, nails shapes and maintenance of the natural nails. Course will cover client education on different nail disorders and their proper treatment. Training is done in a specialized class or in supervised salon (clinical) setting, using models or customer service.

NAT 2011 - Nail Enhancements (5)

This course covers advanced theory and product knowledge of current industry nail enhancements to ready the student for employment. Practical application and removal techniques of nail wraps, tip overlays, acrylics and any current enhancements are practiced. Instruction is provided in specialized classes or in supervised salon setting using models or customer service. This course prepares the student for the Colorado state board licensing examination.

NAT 2030 - Nail Tech Prep-State Board (4)

Provides preparation for State Boards. Allows the student the opportunity to gain knowledge in the practical and/or written examination required by the Colorado Board of Barber/Cosmetology.

NAT 2075 - Special Topics (3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

NAT 2088 - Practicum (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.

NAT 2090 - Adv Nail Technician Studies (3)

Provides students with a vehicle to pursue in-depth exploration of special topics of interest.

NUA-Nursing Assistant Courses

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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores. Corequisite: NUA 1070.

NUA 1005 - Home Health Aide Theory (2)

Introduces the expanding field of Home Health Nursing, the uniqueness of Home Health Care and the vital role that the nursing assistant plays as part of the home care team. Covers how to assist home care patients with activities of daily living and maintain a safe, clean and comfortable environment. Covers the differences and challenges of caring for patient in their natural home environment versus institutional settings.

NUA 1070 - Nurse Aide Clinical Experience (1)

Applies knowledge and skill gained in NUA 1001 to patient care.

Corequisite: NUA 1001.

NUA 1071 - Clinical: (0.25)

Expands and applies knowledge and skill gained in NUA 1070 to client care.

NUA 1080 - Home Health Aide Internship (0.25)

Prepares the nurse aide for entry-level into the home health care setting.

NUR-Nursing Courses

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.

NUR 1070 - Clinical I (1)

Offers the clinical practicum to apply the related nursing theory.

Corequisite: NUR 2090 and NUR 2091.

NUR 2013 - Professional Path to Nursing (3)

Introduces students in the Integrated Nursing Pathway to professional nursing within the culture of healthcare safety and quality improvement. This course provides an understanding of attributes, roles and responsibilities of the professional nurse; essential knowledge, developing skills and attitudes required for team participation in a culture of safety and quality improvement; role of culture in the nurse-patient relationship; and interpersonal communication critical to the nurse-patient relationship.

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.

NUR 2090 - RN Refresher Course (8)

Presents material that is designed for all RNs regardless of time absent from nursing practice, to explore avenues of employment. Clinical experience is held in the hospital to refresh and update basic nursing skills. Other opportunities for clinical experience may include home health, long-term, rehabilitation, and hospice

Corequisite: NUR 1070 and NUR 2091.

NUR 2091 - RN Refresher Course Clinical (2)

Presents material as a co-requisite to NUR 2090 the RN didactic portion of the completer program. Students will demonstrate skill attainment gained in NUR 2090.

Corequisite: NUR 1070 and NUR 2090.

OSH-Occupational Safety Technician Courses

OSH 1310 - 10HR Constructn Industry Stnds (1)

Provides a 10-Hour OSHA certification course for the construction industry and participants will review the current OSHA standards contained in 29 CFR 1926. Participants that complete the course will receive a certificate of completion from the United States Department of Labor, Occupational Safety and Health Administration. The course is taught by instructors certified by the Occupational Safety and Health Administration.

OSH 1311 - 30HR Constructn Industry Stnds (3)

Provides a 30-Hour OSHA certification course for the construction industry and participants will review the current OSHA standards contained in 29 CFR 1926. Participants that complete the course will receive a certificate of completion from the United States Department of Labor, Occupational Safety and Health Administration. The course is taught by instructors certified by the Occupational Safety and Health Administration.

OSH 1075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

OUT-Outdoor Studies Courses**OUT 1010 - Wilderness Survival Skills (3)**

This course emphasizes the physiological, psychological and practical principles of survival. Survival equipment, wilderness improvising techniques, and wilderness dangers are included.

OUT 1030 - Orienteering and Routefinding (2)

Combines the topics of using different topographical maps and compasses in order to safely plan a route in the wilderness with Orienteering (organized competitive cross-country land navigation). Orienteering rules, symbols, clues, and clubs are covered. Field trips may include student participation in a scheduled Orienteering meet.

OUT 1050 - Backcountry Cooking (1)

Focuses on menu planning, nutritional requirements for wilderness camping, and meal preparations. Includes cooking a backcountry meal.

OUT 1069 - Avalanche Awareness Level II (2)

Enhances students understanding of snow and avalanche phenomena, hazard evaluation, rescue, avalanche forecasting and avalanche hazard mitigation. Students will receive a certificate of completion stating that the course was taught following the guidelines of the American Avalanche Association.

Prerequisite: Grade of C or higher in the following course: OUT 1670 or permission of instructor.

OUT 1075 - Special Topics (1-4)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

OUT 1076 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

OUT 1087 - Cooperative Education Internsh (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.

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 1110 - Colorado Fourteeners (2)

Presents an historical look into the naming and climbing of Colorado's 14,000 foot peaks. Includes information on the current routes to ascend the peaks.

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 1125 - Mountain Orientation (2)

A concentrated field experience in the Colorado mountain environment is provided in this course. Emphasis is on backpacking skills, safety procedures, ecology, geology, geography and group dynamics.

OUT 1130 - Desert Orientation (2)

A concentrated field experience in a desert environment is provided in this course. Emphasis is on procedures for group travel and camping, ecology, geography and safety.

OUT 1135 - Canyon Orientation (2)

Encounters the environment of the Canyonlands, Colorado Plateau or the Grand Canyon, where students develop proficiency in canyon travel, group camping and will explore the geology, geography and ecology of the canyon country.

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 1200 - Wilderness Ethics (2)

Emphasizes the motivation, aesthetics, and ethics of wilderness. Examines viewpoints from Native American, Western, historic, and modern environmental writers.

OUT 1205 - Leave No Trace Trainer Cert (2)

Introduces the student to the principles of Leave No Trace and prepares students to teach Leave No Trace curriculum in a variety of outdoor and urban settings. This class is a must for guides, outfitters, outdoor educators, agency employees, scout/youth group leaders, or anyone who cares about minimizing impact on the Colorado backcountry.

OUT 1210 - Risk Mgmt of Outdoor Prof (1)

Introduces risk management in the outdoor environment. Students will gain a better understanding of the inherent risks associated with various outdoor activities. They will learn how to analyze and minimize those risks, how to establish emergency protocols to react to those risks, and how to take the proper steps to resolve the consequences from those risks. After learning to identify, assess and reduce the risk, students will write a risk management plan specific to their area of interest. This course will cover outdoor leadership skills and delve into backcountry emergency situations and scenarios.

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.

Offered: Summer.

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) in 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.

Offered: Fall.

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) in 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.

Offered: Spring.

OUT 1274 - Survival Plants: Summer II (3)

Introduces the student to useful wild plants of Summer not seen in earlier classes, as well as a review of botany and topics covered in previous classes. Students will learn wild food preparation, cooking and wild preservation methods. Students will experiment with wild salads, raw vs. cooked dishes and aquatic plant cooking. In addition, advanced cordage construction methods will be covered. The wet method of cordage construction will be practiced.

Offered: Summer.

OUT 1300 - Kayaking (1)

Provides basic kayak and water reading skills. The students will learn boating safety, hazard evaluation, terminology, whitewater river reading skills, paddling strokes, bracing techniques, peel out and eddy turns, and rescue and self rescue techniques including wet exits, Eskimo rescues and introduction to and practice of the Eskimo roll.

OUT 1310 - White Water Rafting (1)

This field experience course provides whitewater boat handling and reading skills through experience on selected rivers in Colorado and Utah. Students will learn river trip planning, safety procedures, equipment, logistics, camp management, hazard evaluation and minimum environmental impact on environments. Safe and efficient river travel, leadership and judgment development are emphasized.

OUT 1330 - River Orientation (2)

Provides whitewater boat handling and water reading skills through experience on selected rivers. Students will learn river trip planning, river safety procedures, equipment, logistics, camp management, hazard evaluation, the natural history and archeology of river environments and minimum environmental impact on river environments.

OUT 1350 - Flyfishing I (1)

Enables the student to gain the knowledge and skill of the fine art of flyfishing including the selection and use of appropriate equipment, fly-casting techniques, flyfishing entomology, and guiding techniques. Includes several field trips to local flyfishing areas.

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 (PADI) 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: Grade of C or higher in the following courses: OUT 1385, OUT 2002, OUT 2003 and OUT 2300 or permission of instructor.

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 1520 - Ice Climbing I (1)

Introduces technical (roped) ice climbing, including equipment selection and safety, knots, belaying and climbing, rappelling and climbing safety.

OUT 1530 - Technical Canyoneering (2)

Introduces students to a variety of travel techniques for non-technical and technical canyon environments. Topics include: weather, canyon geography, navigation, group management and safety, technical rope work, climbing skills and self-rescue. A variety of wet and dry canyon travel techniques will be practiced, including: walking, scrambling, climbing, rappelling, jumping and swimming. Leave No Trace techniques in a desert canyon environment as well as a general knowledge of natural history and cultural history of the region will be emphasized.

OUT 1540 - Challenge Course Facilitation (2)

Provides approaches to challenge course management including construction and maintenance of high and low elements, facilitation and group dynamics, risk management and safety, and challenge course philosophies.

OUT 1550 - Mountaineering (3)

Provides students with a combination of skills and practical experience in the fundamentals of mountaineering. Emphasizes basic climbing skills and techniques, equipment usage, safety systems, mountain travel and awareness, problem solving and decision-making, high altitude climate and weather, wilderness ethics, and physical fitness.

OUT 1570 - Basic Search and Rescue (3)

Covers the basic fundamentals required for search and rescue in a wilderness environment. Includes tracking techniques and field trips.

OUT 1580 - Climbing Self Rescue (2)

Informs climbers how to confidently handle vertical rescue scenarios ranging from simple to complex in a two to three person climbing team. Scenario based instruction will cover technical lowers and raises of the injured climber, pick-offs, knot passes, and load transfers. This course does not intend to teach first aid practices for climbers but instead focuses on the technical skills necessary for a climbing party to extract an injured climber from a vertical setting.

OUT 1585 - Swift Water Rescue Tech I (1)

Trains and certifies river professionals and recreational users how to handle emergencies and rescue situations on the river. Topics include shallow water crossing, river swims, swimming rescues, shore based rescues, boat handling and boat based rescues, related equipment and communication in a variety of rescue situations.

OUT 1600 - Winter Wilderness Surviv Skills (2)

Emphasizes winter survival techniques in the nival 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 1605 - Introduction to Winter Sports (1)

Provides an overview of at least two of the following winter sports: alpine skiing, snowboarding, ice skating, telemark skiing, nordic skiing, snowshoeing, or skate skiing. Enables the student to gain the knowledge and techniques necessary for winter sports on beginner to intermediate groomed or backcountry terrain. Incorporates multiple field trips to ski areas or other outdoor venues.

OUT 1649 - Alpine Skiing I (1)

Presents a basic Alpine skiing course designed for those who have had little or no prior downhill skiing experience. The course will consist of a combination of on the snow classes at an established ski area and classroom instruction at the college. For purposes of instruction, students will be assigned to small groups based on their present skiing ability. All on snow instruction will be by certified ski instructors employed by the ski area.

OUT 1651 - Snowshoeing (1)

Emphasizes the basic skills, equipment, clothing and techniques of snowshoeing. It includes the objective dangers involved with winter recreation.

OUT 1652 - Snowboarding I (1)

Serves as a basic snowboarding course designed for those who have had little or no prior snowboarding experience. Incorporates a combination of on the snow classes at an established ski area and classroom instruction at the college. For purposes of instruction, students are assigned to small groups based on their snowboarding ability. Snow instruction is taught by certified ski instructors.

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 1685 - Snow Orientation (2)

A concentrated field experience in snow covered terrain and winter mountaineering is provided. Emphasis is on orienteering, natural shelter construction, site selection and survival first aid.

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).

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 students diving skills as well as introducing the student to the different types of dives available.

Prerequisite: Grade of C or higher in the following courses: OUT 1385 and OUT 2002 or permission of instructor.

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: Grade of C or higher in the following courses: OUT 1385, OUT 2002, OUT 2003 and OUT 2300 or permission of instructor.

OUT 2007 - Open Water Scuba Instructor (3)

Provides the students with specific instructor skills and refines their teaching ability by showing them the most current methods for training divers. Students will fine-tune confined water teaching presentations as well as get more opportunities to polish their abilities to evaluate student diver skills in the confined and open water environments. Students will perform rescues and fine tune rescue abilities as well as demonstrating how to conduct a continuing education course.

Prerequisite: Grade of C or higher in the following courses: OUT 1385, OUT 2002, OUT 2003 and OUT 2300 or permission of instructor.

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 and calling for a rescue and organizing an evacuation in the event of a wilderness emergency are also covered.

OUT 2044 - Wilderness First Responder (4)

Is intended for outdoor enthusiasts and professionals who travel, recreate, and work in remote environments. This course 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.

OUT 2045 - WFR Refresher (1)

Meets the standards for recertification of a Wilderness First Responder certification. Topics to be included are CPR, patient assessment, trauma, medical, and environmental emergencies. This course is required to maintain a current Wilderness First Responder certification, which must be recertified every three years.

OUT 2050 - Alpine Ski Instructor I (2)

Provides the skills and knowledge required to become a certified alpine ski instructor at the PSIA-AASI Level 1. This course teaches proper execution of skiing demonstrations and movement analysis. It evaluates students' technical knowledge and teaching skills to meet requirements set by the Professional Ski Instructors Association (PSIA) for certification. Successful completion of this course may result in an PSIA Alpine Skiing Level 1 Instructor certification.

OUT 2051 - Snowboard Instructor I (2)

Provides the skills and knowledge required to become a certified snowboard instructor at the Professional Ski Instructors Association – American Association of Snowboard Instructors (PSIA-AASI) Level 1. This course teaches proper execution of snowboarding demonstrations and movement analysis. It evaluates students' technical knowledge and teaching skills to meet requirements set by the AASI for certification. Successful completion of this course may result in an AASI Snowboard Level 1 Instructor certification.

OUT 2065 - Wilderness Therapy Skills Clinic (3)

Covers critical skills for future wilderness therapy field guides and program creators, bridging the gap between theory and practice. The course focuses on self-awareness, helping skills, behavioral health theory, mental health skill development, and the history and context of wilderness therapy.

OUT 2075 - Special Topics (1-4)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

OUT 2200 - Naturalist Training (3)

Examination of a variety of naturalist topics and identification of multiple plant and animal species including ecosystems, ecology, geology, nature journaling, interpretive guide techniques, and identification of plants, insects, reptiles, amphibians, birds, and mammals.

OUT 2205 - Leave No Trace-Master Educator (3)

Introduces the concepts and teaching of Leave No Trace (LNT) curriculum in a variety of settings. The course covers the history, seven principles, and adaptations of Leave No Trace. Successful course completion will result in a LNT master educator designation at the national LNT Center for Outdoor Ethics.

OUT 2255 - Survival Plants: Fall II (3)

Introduces the student to useful plants of the Fall season not seen in earlier Survival Plants classes, as well as a review of botany learned in earlier classes. Students will continue learning wild food preparation, cooking and preservation (dehydration). They will experiment with various wild plant food combinations, wild plant spices and flavorings. In addition, fire starters both primitive and modern will be discussed and practiced (weather permitting). Natural tenders, friction fires and fire bundles will be covered.

Offered: Fall.

OUT 2260 - Survival Plants: Spring II (3)

Introduces the student to the useful wild plants of Spring not seen in earlier classes, as well as a review of botany and topics covered in previous classes. Students will learn and practice harvesting methods such as winnowing grain from chaff using the wind. Wild food preparation, cooking and preservation will be expanded. Prepared food categories will be wild teas and coffees, wild sprouts and wild sweets and deserts.

Offered: Spring.

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: 0Grade of C or higher in the following courses: OUT 1385, OUT 2002, and OUT 2003 or permission of instructor.

OUT 2305 - Paddle Sports (2)

Focuses on the methods and skills of conducting and leading safe lake and river trips in various types of watercraft such as canoes, kayaks, or inflatable boats. Students will learn modern river paddling techniques, trip planning and organization, basic river rescue and safety skills, federal and local permit systems, and minimal impact camping and boating techniques for a river corridor. This course includes a multi-day river expedition.

OUT 2310 - White Water Rafting Guide (2)

Meets the requirements of Colorado Statute 33-32-105.5 which provides for the minimum qualifications of professional whitewater rafting guides. The classroom portion includes a review of the logistics, equipment, clothing, safety considerations, risk management, outdoor ethics, river reading fundamentals, and leadership skills. The remainder of the course will be spent with a licensed outfitter practicing all related and required skills while on the river.

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: Grade of C or higher in the following course: OUT 1510 or permission of instructor.

OUT 2520 - Ice Climbing II (1)

Continues to develop proficiency in technical ice climbing including equipment selection and safety, knots, belaying and climbing, rappelling and climbing safety. Safe, fast and efficient ice climbing, leadership, ice climbing site management, and judgment development will be emphasized.

Prerequisite: Grade of C or higher in the following course: OUT 129 or permission of instructor.

OUT 2640 - Alpine Skiing II (1)

Presents an advanced skiing course designed for students who are ready for advanced instruction in parallel skiing. The course will consist of a combination of on the snow classes at an established ski area and classroom instruction at the college. Students will be divided into small groups and assigned to instructors based on demonstrated skiing ability. All on snow instruction will be by certified ski instructors employed by the ski area.

OUT 2650 - Snowboarding II (1)

Introduces advanced snowboarding designed for those with prior snowboarding experience and can link skidded turns with good speed and control on green and blue terrain. Covers a combination of on the snow classes at an established ski area and classroom instruction at the college. Students are assigned to small groups based on their present snowboarding ability. Snow instruction is taught by certified ski instructors.

PAS-Physician Assistant Courses

www.rccc.edu/physician-assistant

Courses can only be taken after acceptance to the PA program.

PAS 6001 - Professional Seminar I (1)

Introduces the physician assistant student to the PA program and the PA profession. This course will orient and prepare the student to succeed as a graduate student and a future healthcare professional. The course covers the history of the profession and leadership of the PA in the health care delivery system.

PAS 6002 - Professional Seminar II (1)

Provides the physician assistant student with an introductory basis of the global practice of medicine to include public health concepts and the importance of collaborative, interprofessional teams. The course prepares the PA student to become a healthcare provider who incorporates cultural sensitivities, recognizes disparities in the delivery of healthcare, and progresses towards leadership in healthcare. The course introduces basic billing and coding concepts.

PAS 6006 - Science Foundation of Medicine (1)

Covers the practice of medicine through foundational scientific principles, including basic biochemistry and genetics. The course addresses the organ systems affected by biochemical and genetic processes and applies their impact on health and disease. The course will also appraise the current literature for additional scientific developments that affect patient care.

PAS 6009 - Human Anatomy I (2)

Provides the physician assistant student with a foundation of normal human anatomic structure and function. The course prepares the student to integrate this knowledge with clinical presentation, examination findings, and the anatomic changes seen in pathophysiological processes. Systems: integument; eyes; head; ears, nose and throat; cranial nerves; respiratory; cardiovascular; abdomen.

PAS 6010 - Human Anatomy Lab I (1)

Provides the physician assistant student opportunities to identify normal and abnormal anatomy on a human cadaver while participating in dissection activities. The course assists the student in the integration of normal human anatomic structure and function, clinically applied human anatomy, and the anatomic changes seen in pathophysiological processes. Systems: integument; eyes; head; ears, nose and throat; cranial nerves; respiratory; cardiovascular; abdomen.

PAS 6011 - Human Anatomy II (2)

Provides the physician assistant student with a foundation of normal human anatomic structure and function. The course prepares the student to integrate this knowledge with clinical presentation, examination findings, and the anatomic changes seen in pathophysiological processes. Systems: abdomen (continued), genitourinary, endocrine, musculoskeletal, lymphatic.

PAS 6012 - Human Anatomy Lab II (1)

Provides the physician assistant student opportunities to identify normal and abnormal anatomy on a human cadaver while participating in dissection activities. The course assists the student in the integration of normal human anatomic structure and function, clinically applied human anatomy, and the anatomic changes seen in pathophysiological processes. Systems: abdomen (continued), genitourinary, endocrine, musculoskeletal, lymphatic.

PAS 6018 - Psychosocial Care (3)

Prepares the PA graduate student to recognize the common behavioral health diagnoses that are relevant to primary care. The student identifies the psychiatric and psychosocial aspects of the individual and determines an appropriate plan of care. This includes appropriate medication use, referrals, and consultations with various members of the behavioral medicine team. The student also learns techniques that prepare him/her to discuss difficult psychosocial topics with patients.

PAS 6021 - Physiology/Pathophysiology II (4)

Provides the physician assistant student with a physiological and pathophysiological foundational basis needed to practice medicine. This includes the study of physiology and pathophysiology in both health and disease. The course addresses both in the context of each organ system to include cardiac, vascular, female genitourinary and reproductive, gastrointestinal, renal, and musculoskeletal.

PAS 6025 - Psychosocial Care (2)

Prepares the PA graduate student to recognize the common behavioral health diagnoses that are relevant to primary care. The course covers identifying the psychiatric and psychosocial aspects of the individual and determining an appropriate plan of care. This is to include appropriate medication use and referrals, and consultations with various members of the behavioral medicine team. Techniques that will prepare the PA provider to discuss difficult psychosocial topics with patients are covered.

PAS 6030 - Pharmacology I (2)

Provides the physician assistant student with the fundamental principles of pharmacology. For prescription and non-prescription medications, the student learns the mechanism of drug action, metabolism, elimination, and toxicity. This course provides a pharmacological foundation to assist the student in choosing appropriate medications to treat a patient and his/her disorder or disease.

PAS 6031 - Pharmacology II (4)

Builds on the foundation of pharmacotherapy by focusing upon the importance of pharmacologic action, classification, and therapeutic use. The student assesses the clinical and therapeutic use of medications as well as the recommended treatment plan for specific disease states. The student evaluates and individualizes medication regimens for patient-based on-drug attributes, clinical evidence, comorbidities, mechanism of action, drug safety, and monitoring parameters.

PAS 6032 - Pharmacology III (2)

Builds on foundational pharmacologic principles to focus on mechanism of action, metabolism, elimination, and toxicity of medications. The course covers the clinical and therapeutic use of medications for a specific disease state and the choice of an appropriate pharmacologic treatment based upon individual patient attributes. Analysis of the medication choice for each patient based upon clinical evidence, comorbidities, drug safety, and monitoring parameters is included.

PAS 6034 - Clinical Pharmacotherapeutics (2)

Covers the safe and effective prescribing of medications. The course integrates basic pharmacology, pathophysiology, and advanced pharmacotherapeutic principles for the selection of appropriate medications in the prevention and treatment of disease. The course covers various methodologies to incorporate patient history, assessment, and diagnoses into treatment plans that include critical analysis and evidence-based principles.

PAS 6040 - Clinical Medicine I (13)

Prepares the physician assistant student to identify common presentations of disease states, correlate pathophysiology, diagnostics, pathogens of diseases, order and interpret appropriate testing, and formulate a differential diagnosis. The course includes analysis of the differential diagnosis and proposal of an assessment and plan for any patient across the lifespan. The course covers pertinent consults and referrals, and provides appropriate patient education. Organ systems include integument, eyes, ears, nose, throat, neurological, endocrine, male genitourinary, and pulmonary.

PAS 6041 - Clinical Medicine Lab I (2)

Prepares the student to integrate concepts of the practice of medicine through experiential methods including problem-based learning, team-based learning, script concordance, etc. The student will be provided opportunities to develop critical-thinking skills in the approach to patient care. Systems: integument; eyes; ears, nose and throat; endocrine; genitourinary and reproduction.

PAS 6042 - Clinical Medicine II (13)

Prepares the physician assistant student to identify common presentations of disease states, correlate pathophysiology, diagnostics, pathogens of diseases, order and interpret appropriate testing, and formulate a differential diagnosis. The course includes analysis of the differential diagnosis and proposal of an assessment and plan for any patient across the lifespan. The course covers pertinent consults and referrals, and provides appropriate patient education. Organ systems include integument, cardiac, vascular, genitourinary and reproductive, gastrointestinal, renal, and musculoskeletal.

PAS 6043 - Clinical Medicine Lab II (2)

Prepares the student to integrate concepts of the practice of medicine through experiential methods including problem-based learning, team-based learning, script concordance, etc. The student will be provided opportunities to develop critical-thinking skills in the approach to patient care. Systems: integument (continued); lungs; cardiac; vascular; genitourinary and reproduction (continued); gastrointestinal; musculoskeletal; neurological.

PAS 6046 - Biochemistry (2)

Provides the physician assistant student with the clinical basis of biochemistry needed to practice medicine. Topics include the biochemical and genetic basis of both health and disease. The course addresses the organ systems affected by biochemical and genetic processes and changes occurring in health and disease.

PAS 6047 - Physiology/Pathophysiology I (6)

Provides the physician assistant student the physiological and pathophysiological foundational basis needed to practice medicine. Topics include the study of physiology and pathophysiology in both health and disease. The course addresses each in the context of each organ system to include integument, eyes, ears, nose, throat, nervous, endocrine, male genitourinary, and pulmonary.

PAS 6050 - History and Physical Exam I (4)

Prepares the physician assistant student to obtain appropriate and pertinent historical information and perform a physical examination in any patient across the lifespan. Both history and physical examination findings assist in the formulation of a reasonable differential diagnosis and ultimately a diagnosis. The course teaches students to prepare proper and legal documentation. The course includes an introduction to basic primary care procedures. Integument, eyes, ears, nose, throat, lymphatic, genitourinary and reproduction, and lungs are covered.

PAS 6051 - History and Physical Exam II (4)

Prepares the physician assistant student to continue to refine history-taking and physical examination skills in any patient across the lifespan. Both history and physical examination findings will assist in the formulation of a differential diagnosis and ultimately a diagnosis. Communication skills and procedures will be emphasized through practice. Introduction to basic primary care procedures will be included. Cardiac, vascular, genitourinary and reproductive, gastrointestinal, and musculoskeletal systems are covered.

PAS 6053 - Advanced Practice Seminar (2)

Prepares physician assistant graduate students for leadership within the healthcare team, and the practice and business of medicine. The course prepares students to code and bill appropriately and manage risk through patient safety measures and quality improvement. The course provides opportunities for students to practice inter-professional team skills through effective communication and leadership. Global, rural and underserved medical practices are covered.

PAS 6060 - Evidence - Based Medicine (2)

Provides the physician assistant student with a foundation in the statistical techniques used to evaluate clinical research. The student integrates biomedical research concepts and critical evaluation of the medical literature to determine their application to patient care. The student develops a viable research proposal in preparation for the completion of the graduate capstone project.

PAS 6075 – Special Topics (3)

Provides student with a vehicle to pursue in depth exploration of a special topic of interest.

PAS 6100 - Competencies for Clinical Practice (3)

Provides experiences with clinical skills and assessment of patients. The course leads to Advanced Cardiac and Pediatric Life Support certification and practice in clinical procedures. The course prepares students for Supervised Clinical Practice Experiences (SCPEs) including: practice with documentation; interviewing skills; examination techniques; development of differential diagnoses, assessments and treatment plans; patient education; and preventative care.

PAS 6105 - Clinical Decision Making I (2)

Prepares physician assistant students for clinical practice by integrating prior didactic knowledge with patient care. The course facilitates the development of students' critical thinking skills to allow them to determine appropriate treatment plans. Formative assessments evaluate students' skills and provide feedback and direction in the students' ongoing preparation to become competent practicing physician assistants.

PAS 6106 - Clinical Decision Making II (2)

Allows students to integrate prior didactic knowledge for clinical practice. Critical thinking skills are developed to formulate the most appropriate treatment plan for an individual patient. The course will prepare physician assistant students for summative examinations and daily clinical practice in a primary care setting.

PAS 6700 - Patient Care I (6)

Prepares physician assistant graduate students to assess and manage patients within a Supervised Clinical Practice Experience (SCPE). Clinical experiences provide students opportunities to care for patients under the direct supervision of a practicing clinician-preceptor. This course includes end-of-rotation activities and assessments.

PAS 6701 - Patient Care II (3)

Prepares physician assistant graduate students to assess and manage patients within a Supervised Clinical Practice Experience (SCPE). Clinical experiences provide students with opportunities to care for patients under the direct supervision of a practicing clinician-preceptor. Clinical assignments provide the opportunity to advance students' clinical skills and provide exposure to more complex patients.

PAS 6702 - Patient Care III (12)

Prepares physician assistant graduate students to assess and manage patients within a Supervised Clinical Practice Experience (SCPE). Clinical experiences provide students with opportunities to care for patients under the direct supervision of a practicing clinician-preceptor. Clinical assignments provide the opportunity to advance the student's clinical skills and provide exposure to more complex patients. This course may include a four week assignment for development and execution of the Master's capstone research project.

PAS 6703 - Patient Care IV (9)

Prepares physician assistant graduate students to assess and manage patients within a Supervised Clinical Practice Experience (SCPE). Clinical assignments provide the opportunity to advance students' clinical skills and provide exposure to more complex patients. This course may include a four week assignment for development and execution of the master's capstone research project.

PAS 6704 - Patient Care V (6)

Prepares physician assistant students to assess and manage patients within a Supervised Clinical Practice Experience (SCPE) and provide care to patients under the direct supervision of a practicing clinician-preceptor. This course may include a four week assignment for development and execution of the master's capstone research project. Cumulative competency is evaluated by summative examinations, assessment, and portfolio review. A national board exam preparation opportunity is presented.

PAS 6889 - Master's Project/Capstone (3)

Requires students to prepare the capstone project required for graduation from the PA program. Under the guidance of a faculty advisor, students identify an approved health care topic or issue, develop a research proposal, conduct appropriate research of the medical literature using evidence-based medicine principles, and create a research paper and a poster presentation that will be submitted for publication.

PED-Physical Education Courses

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 cardiorespiratory, 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. 30 Contact Hours

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.

Prerequisite: Grade of C or higher in the following course: PED 1002 or permission of instructor.

PED 1006 - Fire Academy Fitness (2.5)

Focuses on Basic Fire Academy students who are interested in improving total fitness. Includes an individual fitness evaluation, computerized analysis of results and a prescribed exercise program. Emphasizes improving cardiovascular fitness, muscular strength, muscular endurance and addressing any fitness deficiencies revealed in the initial testing.

PED 1010 - Fitness Center Activity I (1)

Focuses on improving total fitness via an aerobic circuit training program. Includes an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. Covers the basic components of fitness including flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition. Weight machines, stationary bicycles, and computerized cardiovascular equipment are incorporated to elicit improvements in fitness.

PED 1011 - Fitness Center Activity II (1)

Serves as an advanced course for individuals interested in reaching a higher level of total fitness via an aerobic circuit training program. 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, muscular endurance, cardiovascular fitness, and body composition. Weight machines, stationary bicycles, and computerized cardiovascular equipment are used to elicit improvements in fitness.

Prerequisite: Grade of C or higher in the following course: PED 1010.

PED 1025 - Ski Conditioning (1)

An individual conditioning program that builds both aerobic and muscle strength and promotes flexibility for the student planning to participate in either alpine or nordic skiing.

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 and Toning (1)

Introduces exercise techniques to improve overall physical fitness. Emphasizes the interaction between cardiovascular conditioning, muscular strength and endurance, flexibility and program design integrated into an aerobic format. Focuses on blending together different combinations and sequences of exercises while conditioning the entire body. Students exercise using various types of resistance equipment.

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.

Prerequisite: Grade of C or higher in the following course: PED 1043 or permission of instructor.

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 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 1062 - Tai Chi II (1)

Emphasizes the instruction of Tai-Chi from a practical and scientific approach with illustrations of applications for each of the movements in daily life. Cardiovascular training, strength and flexibility training, balance and coordination are integral parts of the Tai-Chi training. In addition, psychosocial skills such as meditation, relaxation and self-efficacy are covered.

Prerequisite: Grade of C or higher in the following course: PED 1061 or permission of instructor.

PED 1063 - Martial Arts I (1)

Introduces basic martial arts techniques and forms designed to improve the physical and mental capacity of an individual. Enables the student to gain an understanding of the basic philosophies and concepts around the martial arts and the approach to ethics. Provides a clear-cut guide for developing a powerful sense of character and will.

PED 1065 - Self Defense (1)

Introduces the basic skills and techniques of the art of self-defense.

PED 1075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PED 2004 - Fencing I (1)

Presents a beginning course in the art and skill of fencing. Topical discussions and practical uses of appropriate equipment, rules, safety, footwork, and defensive/attack strategies will be covered.

PED 2005 - Fencing II (1)

Continues the course in the art and skill of fencing. Topical discussions and practical uses of appropriate equipment, rules, safety, footwork, and defensive/attack strategies will be covered. The focus of this course will be on the tactical wheel and bouting.

Prerequisite: Grade of C or higher in the following course: PED 2004 or permission of instructor.

PED 2008 - Tennis I (1)

Introduces tennis and focuses on improving the skill level of the student. Emphasizes the elements of tennis including the rules of the game, groundstrokes, serving, the various shots, and singles and doubles play and strategies.

PED 2012 - Ultimate Frisbee (1)

Introduces and develops the basic techniques and strategies for Ultimate Frisbee. The class will use a tactical approach to teaching the basic of invasion game strategies and develops basic forehand and backhand techniques for throwing and catching.

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.

PED 2085 - Independent Study (1)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PHI-Philosophy Courses**PHI 1011 - Intro to Philosophy: 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. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 1012 - Ethics: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. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 1013 - Logic: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 1014 - Comparative Religions: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 1015 - World Religions-West: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 1016 - World Religions-East: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 1017 - Psychology of Religion (3)

Focuses on the application of psychological principles and theories to religious phenomena, including religious practices, beliefs, and rituals. Introduces an historical appreciation of psychologists' attempts to understand religion, continues with an exploration of select theories, and concludes with an analysis of modern problems and future directions.

PHI 1023 - Native American Religion (3)

Introduces the student to the primary beliefs and practices found in Native American tribes, and to trace the development of these religious systems from their oral beginnings through to modern religious revivals.

PHI 1040 - Religion in American Culture (3)

Investigates the various ways in which religion and American culture interact. Beginning with the religion of Native Americans, which existed in a pre-modern society where religion was unchallenged as the pre-eminent organizing principle to our post-modern era, where religion competes with a multiplicity of other belief systems in a complex societal matrix. Focuses on the sundry ways in which religion and American culture interface.

PHI 1041 - Old Testament (3)

Surveys the literature produced by ancient Israel from its inception in the 10th century BCE to its absorption into the Roman Empire. The Hebrew Scriptures along with selected Apocryphal writings will be examined. The course will focus on the interpretation of these texts in light of the historical and cultural milieu from which they arose. Particular attention will be paid to the comparison of the literature of ancient Israel to that of its neighbors.

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 2002 - Religion and Film (3)

Introduces basic concepts to the academic study of religion and illustrates those concepts by examining the ways in which a number of contemporary films embody religious themes. Particular attention focuses on the challenges modernity and postmodernity poses to traditional religion.

PHI 2003 - Intro to Buddhism (3)

Introduces students to the history, philosophy and practices of 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 2004 - Introduction to Hinduism (3)

Provide students with a broad overview of the history, philosophy, and practices of Hindu tradition. Because of the vast complexity of the subject matter the course in no way intends to be comprehensive but rather to provide an introduction to the foundations of Indian cultural tradition, the evolution of Hindu philosophical and spiritual ideals, as well as a cursory understanding of Hindu nationalism and modern Hindu religious practice.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 2014 - Philosophy of Religion: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 2020 - Philosophy-Death & Dying: AH3 (3)

Explores the major philosophical questions surrounding death and dying: the metaphysical arguments for and against the existence of a soul and life after bodily death, the epistemological assessment of arguments for the soul and life after death, the ethical justifications taken on positions such as rational suicide and physician assisted suicide, as well as a focus on philosophy's existentialist contribution to questions about the meaning of life and the meaning of death. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PHI 2021 - Ancient Philosophy (3)

Introduces the foundation of Western philosophical tradition. Students explore the historical context that gave rise to ancient Greek philosophical inquiry and the questions addressed by its important contributors. Such questions include: Ethical: Can there be an objective moral standard? Is the foundation of morality divinely inspired? Metaphysical: What is the nature of the soul? What are the basic building blocks of reality? Epistemological: What is the nature of human knowledge? Can knowledge be objective?

PHI 2022 - Modern Philosophy (3)

Introduces the central conceptual issues that define Western Philosophy in the modern era through exposure to the historical context that gave rise to the "New Science," as well as significant schools of thought that arose during the 17th and 18th Centuries. Rationalism, Empiricism, Idealism, and the Kantian Revolution with its aftermath will be addressed as the course explores questions of causality and necessity, appearance and reality, faith and reason, and the nature of mind.

PHI 2075 - Special Topics (3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PHI 2085 - Independent Study (1)

Focuses on directed readings and independent study on specific philosophical topics.

PHO-Photography Courses (See Art also)

Photography classes reside under both the ART and PHO prefixes and classes are held in the Visual, Audio, and Media Art department. All photography classes may include the artistic presentation of the nude human form. Grade of C or higher in all PHO, ART 1115, ART 1401, and ART 1402 classes.

PHO 1021 - Image Capture I (3)

Emphasizes the fundamental operations of a DSLR camera. The general operation of the camera, proper camera handling and maintenance, exposure control, depth of field, lenses and the visual characteristics of lenses, and an understanding of how digital capture works are emphasized. Additional topics include: f-stops, shutter speeds, metering modes, use of the histogram, auto focus, auto bracketing, and exposure compensation.

Prerequisite: Basic computer skills and a digital camera with manual settings. Corequisite: PHO 1061.

PHO 1022 - Image Capture II (3)

Emphasizes advanced HDSLR camera operation and an understanding of digital imaging processes and terminology. More advanced controls and application of camera techniques such as exposure, basic flash technique, tethered capture, time-lapse, HDSLR video and motion-based capture will be emphasized. In addition to demonstrating technical competency in the aforementioned areas, students will be expected to utilize these techniques as visual communication tools in order to clearly convey their photographic intent.

Prerequisite: Grade of C or higher in the following course: PHO 1021.
Corequisite: PHO 1062.

PHO 1043 - Perception & Photography I (3)

This course presents the fundamentals of visual perception, design, and seeing in the photographic medium. Topics include: elements of composition, Gestalt principles and the psychology of seeing, conceptual and perceptual exercises, depth representation, figure/ground, and the development of ideas.

Prerequisite: Grade of C or higher in the following course: PHO 1021.

PHO 1055 - Photog of the Human Form I (3)

Introduces students to the social, artistic, and photographic aspects of figure studies through the fundamentals of photography and lighting. Professional ethics, marketing one's work, and legal issues are also presented.

Prerequisite: Grade of C or higher in the following course: PHO 2004 or permission of department chair.

PHO 1061 - Digital Capture Processing I (3)

This course will cover post processing of digital captures. Methods of transferring files from camera to computer, basic digital asset management, image editing tools, optimizing files for print and screen, image sharpening, proper understanding of black and white tonal scale, methods of converting color captures to black and white images, printing, and matting are included. The lab portion of the class will also be used to assist the production of images required for Photo-Image Capture I and Perception Photography I.

Prerequisite: Basic computer skills and a digital camera with manual settings. Corequisite: PHO 1021.

PHO 1062 - Digital Capture Processing II (3)

This course is a continuation of Digital Capture Processing I and focuses on digital image processing and printing. Topics include: visual understanding of print quality, basic RAW processing, various digital workflows, further development of vocabulary of digital darkroom terminology, creating and utilizing actions in Photoshop, and further advancement of Photoshop technique.

Prerequisite: PHO 1061. Corequisite: PHO 122.

PHO 2004 - Commercial Studio Lighting (3)

Explores the creative uses of studio lighting from the perspective of fine art and commercial photography with an emphasis on three dimensional object photography including, lighting techniques, backgrounds, working with shadows and highlights and photographing flat art.

Prerequisite: Grade of C or higher in the following courses: PHO 1021.

PHO 2032 - Professional Portraiture (3)

This course covers the technical and aesthetic aspects of studio and location portrait photography. Course topics include: lighting ratios, lighting styles, location lighting, small system flash, light modifiers for portraiture, metering, composition, equipment, and posing. Career paths in the field of portraiture such as weddings, environmental, editorial, and studio portraits are covered.

Prerequisite: Grade of C or higher in the following courses: PHO 2004.

PHO 2035 - Architectural Photography (3)

Covers the more advanced aspects of commercial/ architectural photography. Students will explore photographing subjects ranging from products to buildings with an emphasis on meeting the design demands of commercial clients, stock agencies and publishers. Various film types, formats and print reproduction aspects will be explored in depth.

Prerequisite: Grade of C or higher in the following courses: PHO 2004 (fall only class).

PHO 2044 - New Media Storytelling (3)

Introduces the student to new media with an emphasis in storytelling. This course will give students hands on experience in the storytelling aspect of this 21st century medium. Students will create projects that utilize multi image photographic skills, audio gathering, video capture, editing video, animation, and text. Students interested in this course should have prior experience with a wide variety of input devices and software. The approach for this course is diverse in order to include editorial and commercial uses of new media for the web. Students will create still photographs and video to communicate ideas in a rich media environment using appropriate software.

Prerequisite: Grade of C or higher in the following course: PHO 2004.

PHO 2060 - Events and Wedding Photography (3)

Presents skills for the intermediate/advanced photo student interested in learning the professional techniques associated with events (venue) and wedding photography. There will be an emphasis on advanced camera and flash techniques, candid, formal and ceremonial photography. Business and planning aspects will also be covered. Topics covered will include Weddings, Barmitzvah/Basmitzvah, Music Concerts, Sporting Events, Graduations and similar occasions. Students will gain hands-on knowledge and learn practical shooting skills.

Prerequisite: Grade of C or higher in the following courses: PHO 2004 (Spring only class).

PHO 2069 - Professional Inkjet Print II (3)

Introduces workflow and production standards essential to creating color photographic prints suitable for sale or professional display using inkjet printers. Emphasis is placed on color perception, equipment color calibration, equipment usage and maintenance, paper choices, print care and presentation, and using traditional photographic standards for producing bright, rich color prints.

Prerequisite: Grade of C or higher in the following course: PHO 1062.

PHO 2075 - Special Topics (3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PHO 2080 - Internship (3)

Provides students with the opportunity to supplement course work 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: Grade of C or higher in the following course: PHO 2004 and approval of department chair.

PHO 2187 - Business of Photography (3)

Creates a foundation for freelance work, business practices, procedures, and models unique to a career in photography. Course topics include determining price structures, examining varying forms of photography based on students' career plans, equipment and studio needs, business forms, business planning, tax structure, licenses and registration, and self-promotion. The course may include visits by professionals in the field and discussion of career opportunities.

Prerequisite: Grade of C or higher in the following course: PHO 2032 or PHO 2035.

PHO 2188 - Portfolio & Career Exploration (3)

Focuses on the creation of professional visual portfolio(s) and promotional pieces with techniques, styles, and formats appropriate for a photographic career.

Prerequisite: Prerequisite or Corequisite: PHO 2087, course should be taken in last semester.

PHY-Physics Courses

PHY 1105 - Conceptual Physics w/Lab: SC1 (4)

Focuses on mechanics, heat, properties of matter, electricity and magnetism, light and modern physics. Incorporates laboratory experience. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 0250 or equivalent placement scores.

PHY 1107 - Energy Sci & Tec w/Lab: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 0250 or equivalent placement scores.

PHY 1111 - Physics Alg-Based I/Lab: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 1340 or equivalent placement scores.

PHY 1112 - Physics Alg-Based II/Lab: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 1340 or equivalent placement scores and PHY 1111.

PHY 2008 - Field Studies: Energy (4)

Involves in-depth field studies of energy technologies of specific regions both within and outside the United States. Trips lasting from one to fourteen days in length to study the area 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.

PHY 2027 - Energy for Engineers (3)

Provides an in-depth look at the science of energy and energy technologies, with a focus on renewable energy resources and clean technologies. Survey of human-produced energy technologies including steam, hydro, fossil (petroleum, coal, and unconventional), geothermal, wind, solar, biofuels, nuclear, and fuel cells. Explores the current state and possible future of energy transmission and efficiency. Includes an evaluation of different energy sources in terms of a feasibility matrix of technical, economic, environmental, and political aspects. The state of world energy use will provide a context to discuss the need for expansion of renewable energy technology.

Prerequisite: Grade of C or higher in the following courses: PHY 2111.

PHY 2085 - Independent Study (1)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PHY 2111 - Physics Calc-Based I/Lab: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 2410.

PHY 2112 - Physics Calc-Based II/Lab: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 2420 and PHY 2111.

PHY 2113 - PHY Calc-Base III: 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: Grade of C or higher in the following course: MAT 2420. Corequisite: PHY 2112.

PLU-Plumbing Courses

PLU 1001 - Piping Skills (4)

Focuses on the installation of common piping materials in plumbing and HVAC/R systems. Covers pipe math, terminology, common piping materials and application, figuring offsets and common pipe joints. Shop projects including pipe support and hanging, center to center measurements and a variety of pipe joining methods are explored.

PLU 1004 - Plumbing Service (4)

Allows the student to learn how to diagnose and repair common problems associated with plumbing components and systems. Includes faucet repair, water heater replacement and repair, drain cleaning, water closet repair, piping repairs, finding the source of leaks and evaluating problems for repair or replacement. Also focuses on customer relations and communication skills.

PLU 1008 - Soldering & Brazing Skill (0.5)

Teaches the student proper soldering and brazing skills when joining copper tube and fittings. Includes safety, proper soldering and brazing skills, how to assess joint quality and basic center-to-center measurement. The skills learned in this course are helpful to plumbers preparing to take the Colorado practical plumbing test.

PLU 1020 - Residential Plumbing (4)

Enables the student to design and install residential plumbing systems. Students work in the shop installing systems and in the classroom designing systems. Includes the application of code requirements, fuel piping systems, water piping systems, rough-in measurements and installation practices. Also covers installation of components, such as water heaters, tub/shower valves, a variety of shower enclosures and other fixtures. Offered fall semester only.

PLU 2007 - International Plumbing Code (4)

Helps those plumbers working in jurisdictions where the International Plumbing Code has been adopted. This course will review the IPC and help the plumber apply the requirements of this code to the installation of plumbing systems.

PLU 2047 - Hot Water Heating Systems (4)

Focuses on the theory of operation behind hot water heating systems as well as installation, maintenance and repair. Examines air elimination, circulator pump and pipe sizing. Boiler and heat convactor sizing are also discussed.

Prerequisite: Grade of C or higher in the following courses: HVA 1010, HVA 1062 and PLU 1001 or permission of instructor.

PLU 2067 - Radiant Heating Systems (4)

Covers the theory of operation and installation and maintenance of warm water radiant heating systems. Examines different methods of zoning, controls, piping methods, piping types and system components. Upon successful completion, students are able to design, install, document, maintain and trouble-shoot all conventional residential warm water, radiant panel heating systems.

Prerequisite: Grade of C or higher in the following courses: HVA 1005, HVA 1010, and HVA 2047 or PLU 1001 or permission of instructor.

PLU 275 - Special Topics (1-6)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PLU 2080 - Technical Project (1-12)

Enables students to participate in individual study on a special project which is related to the plumbing program. This technical project consists of a written and approved proposal and scheduled progress reports.

Prerequisite: Permission of instructor.

PLU 2082 - Internship (0.50-12)

Students with prior course work in a specific area are eligible for internship. The internship provides the student an opportunity to apply their course studies.

Prerequisite: Permission of instructor.

PLU 2085 - Independent Study (0.50-12)

Students work with the instructor on a specific area with specific objectives and a predetermined project completion date.

Prerequisite: Permission of instructor.

POS-Political Science Courses**POS 1011 - American Government: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

POS 1025 - Amer State and Local Govt: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

POS 1050 - Current Polit Issues: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

POS 2005 - International Relations: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

POS 2020 - Intro to Political Science: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

POS 2025 - Comparative Government: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

POS 2075 - Special Topics (3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

POS 2080 - Internship (1-6)

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.

POS 2089 - Capstone (2)

Provides a demonstrated culmination of learning within a given program of study.

PRA-Park Ranger Courses**PRA 1002 - Intro to Park Ranger Tech (3)**

Introduces the development of public lands in the U.S., the agencies controlling these lands, multi-use doctrine, wilderness, public services provided in parks, and the roles of the park ranger. Focuses on career planning and park ranger responsibilities including law enforcement, natural resource management, protection, and interpretation, such as geologic, biologic and historic or cultural resources. Covers visitor services, emergency response, management, and training.

PRA 1075 - Special Topics ()

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PRA 1078 - Park Ranger Skills Seminar (6)

Focuses on specialized training related to the park ranger field and includes handling of livestock, fence design, building and repair, vehicle driving, park maintenance, budgeting and planning, trail design, construction, and maintenance. This is a hands on course for development and application of skills.

PRA 1080 - Internship (Variable)

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.

PRA 1085 - Independent Study (3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PRA 2003 - Natural Resource Management (3)

Introduces scientific disciplines and complex issues associated with natural resource management. Examines ecosystem management, wildlife management, plant ecology, agricultural management, career planning, public land acquisition, visitor use, natural resource law enforcement, and public policy.

PRA 2005 - Resource Interpretation (3)

Provides a basic course in natural and cultural resource interpretation. Examines the philosophy, techniques, and skills necessary to produce exciting and relevant resource interpretation projects. Incorporates interpretive plans and various techniques used in the field of resource interpretation and public education. Covers the history and development of environmental education and natural/cultural resource interpretation. Multi-use conflict resolution of public education and resource interpretation are emphasized.

PRA 2018 - Outdoor Leadership (3)

Enables the student to develop, acquire and apply outdoor leadership skills and knowledge. Exposes students to 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 minimum impact camping, wilderness ecology, judgment, decision making, group dynamics, and trip logistics. These skills enhance the effectiveness of the student as a professional outdoor leader.

PRA 2055 - Adv Resource Interpretation (3)

Serves as an advanced course in natural and cultural/historic resource interpretation. Provides the student with the skills to plan, prepare, and present exciting and relevant interpretation programs for special visitors and situations using a variety of personal and non-personal techniques. Examples of skills offered include writing and design of site produced publications and exhibit labels, producing basic audio-visual programs, and preparing and presenting special activities such as demonstrations, living history, storytelling, costumed interpretation and dramatic/creative arts. Techniques for the physically or mentally challenged, sensory impaired, elderly and international visitors are discussed. Includes the sensitive handling of controversial/sensitive educational issues.

Prerequisite: Grade of C or higher in the following course: PRA 2005.

PRA 2080 - Park Ranger Internship (3)

This course is designed to give the student a realistic work experience in the field. Work is supervised by park rangers currently employed by land management agencies at various levels of government. These preceptors ensure that the students participate in relevant field work and that they perform to the standards expected of employees of the agencies in which the internship occurs.

Prerequisite: Permission from the department chair is required to register for this course.

PRA 2085 - Independent Study (3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PSY-Psychology Courses

PSY 1001 - General Psychology I: 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. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 1002 - General Psychology II : 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 1010 - Career Development (3)

Assists students in recognizing their career potential and provides tools for making realistic decisions concerning educational and occupational objectives.

PSY 1017 - Parenting (1)

Focuses on effective techniques for working with children with emphasis on setting expectations, consideration of individual differences, satisfactory communication and effective parent-child relationships.

PSY 1075 - Special Topics (1-3)

Provides students with a vehicle to pursue in-depth exploration of special topics of interest.

PSY 2075 - Special Topics (1)

Provides students with a vehicle to pursue in-depth exploration of special topics of interest.

PSY 2080 - Internship (3)

Provides students with the opportunity to supplement coursework with practical work experience related to their educational programs. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

PSY 2085 - Independent Study (Variable)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PSY 2105 - Psychology of Gender: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 2107 - Human Sexuality: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 2110 - Relations: Challenges/Choices (1)

Enables the student to preserve and enhance couple relationships by understanding the role of gender differences; conflict patterns; communication skills; problem solving; meaning of commitment, fun and friendship.

PSY 2112 - Intro to Addictive Behavior (2)

Focuses on addictive behavior and its effect on individuals, families, and society.

PSY 2221 - Social Psychology: SS3 (3)

Focuses on the behavior of humans in social settings, including attitudes, aggression, conformity, cooperation and competition, prejudice, and interpersonal attraction. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 2222 - Psychology of Death/Dying: SS3 (3)

Examines 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 2331 - Positive Psychology: SS3 (3)

Focuses on human strengths rather than the traditional view of psychology that tends to focus on the worst of human nature. This course is designed to explore strengths-based research, concepts of happiness, helpfulness, and resiliency. The research and theories about human nature will go beyond simply not being mentally ill as a form of mental health, which will include optimism, post-traumatic growth, and how to increase emotional, psychological and social functioning. Overall, this course will be focused on understanding one's own sense of life satisfaction and how to further improve well-being. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 2333 - Health Psychology: SS3 (3)

Students will learn an overview of the scientific study of attitudes, behaviors and personality variables related health, illness and bodily systems. Emphasis is on the interaction of biological, psychological and social factors that cause illness and influence its treatment and prevention. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 2440 - Human Growth & Development: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 2441 - Child Development: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 2552 - Abnormal Psychology: SS3 (3)

Examines abnormal behavior and its classification, causes, treatment, and prevention. This is a statewide Guaranteed Transfer course in the GT-SS3 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PSY 2661 - Brain and Behavior (3)

Provides an introduction to the study of the relationship between brain function and behavior. The course presents neuroanatomy and neurophysiology as they relate to human experience and behavior. It demonstrates the application of neuroscience concepts to understand and intervene in human behaviors and disorders. Students will be introduced to modern research methods and ethics in the study of brain and behavior.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

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.

PSY 2771 - Psychology of Personality: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

PVT-Power Vehicle Technology Courses

PVT 1000 - Intro to Power Vehicle Safety (2)

Introduces students to the industry's repair equipment and shop safety requirements. Students explore career possibilities, develop industry skills, practice professionalism, and learn specific job requirements in the power vehicle repair field. The course focuses on general power equipment, emphasizing shop safety procedures including personal safety, emergency procedures, environmental safety issues, and proper handling of hazardous disposal materials.

PVT 1005 - PV Preventative Maintenance (2)

Introduces students to basic engine preventative maintenance procedures for various power equipment and vehicles. Students identify major structural and non-structural components, assemblies, and sections of a variety of power equipment and vehicles. Newly designed engines that meet current EPA regulations are covered. The course focuses on the general power equipment maintenance tools and diagnosis processes used in preventative maintenance procedures.

PVT 1010 - PV Electrical Systems (4)

Introduces students to the basic electrical systems in a wide range of power equipment and vehicles including: basic electrical theory; electrical components; circuit designs; and electronic, fuel, and ignition control systems. The course focuses on circuit testing and system diagnostic procedures.

PVT 1020 - PV Engine Repair (4)

Covers concepts involved in basic power-vehicle small-engine repair. Students identify newly designed engines that meet current EPA regulations. Students demonstrate an understanding of the basic operation of the engine and learn about two-stroke and four-stroke engines. The course covers parts identification and service procedures with special diagnostic equipment.

PVT 1030 - PV Hydraulics (4)

Introduces hydraulic systems and the power flow from the engine to the power train. The course covers fundamental theory and components of hydraulic systems, including pumps, cylinders, valves, transmissions, clutches, and related components. Students recognize and explain the proper uses of testing equipment and troubleshoot hydraulic systems.

PVT 1040 - PV Fuel and Emissions (4)

Develops concepts involving fuel injection systems and emissions in power vehicle engines. Students differentiate between gasoline and diesel fuel, and discuss how each fuel combusts. Students identify newly designed engines that meet current EPA regulations. Course topics include: diagnostics, service, and standard repair techniques of fuel and emission systems.

PVT 1050 - PV Diesel Engines (4)

Introduces students to diesel engine theories, design, and principles. Students compare and contrast diesel engines to gasoline engines and explore differences in repair and maintenance. The class covers diesel fuel as it applies to combustion engines and compares it to gasoline, including safety and usage.

PVT 2010 - PV Advanced Electrical Systems (4)

Prepares students to troubleshoot and perform advanced repair of power equipment and vehicle electrical systems. The class emphasizes ignition, charging, and starting systems. Students diagnose and repair computer-controlled power equipment and vehicle systems.

PVT 2020 - PV Advanced Engine Repair (4)

Builds upon basic two-stroke and four-stroke engine theory, operation, and repair introduced in Engine Repair. Students demonstrate an understanding of the repair process, theories of the power engine, and differences in newly designed engines that meet EPA regulations, such as combustion cylinder design, multi-valve cylinders, and hybrid engine design.

PVT 2030 - PV Drive Systems (4)

Introduces students to drive components used on multiple power vehicles, including transmission assemblies, clutch components, and drive systems. Students demonstrate the use of manufacturers' procedures in the diagnostic and repair of a wide range of power vehicle drive systems. Students identify newly designed engines that meet current EPA regulations.

PVT 2035 - PV Brakes and Suspension (4)

Introduces students to the major chassis and suspension components of power vehicles. This class provides training in the basic servicing of power vehicle frames, suspension, tire, wheel, and brake systems including emergency brakes, Anti-Lock Brake System (ABS), and electronic stability control systems. Diagnostic procedures, routine maintenance, service and repair, adjustment, and special tools are studied.

PVT 2040 - PV Advanced Fuel & Emissions (4)

Builds upon the concepts of fuel injection systems and carburetors in gasoline and hybrid engines as introduced in Fuel and Emissions. Students assess and perform diagnostic, maintenance, and standard repair procedures.

PVT 2050 - PV General Service (4)

Exposes prospective entry-level power vehicle technicians to basic power vehicle maintenance and repair. Focus is on routine and preventative maintenance during an inspection as covered in previous courses. Students identify newly designed engines that meet current EPA regulations including hybrid engine design. Emphasis is on the assembly and pre-delivery inspection of a power vehicle from start to sales.

REC-Recreation Courses**REC 1000 - Introduction to Recreation (2)**

Studies the history, principles, philosophy, and contemporary problems and trends of recreation and their influence upon today's American society.

REC 1001 - Introduction to Recreation (3)

Examines the structure and economics of recreation in the United States as well as the inter-relationships between private, public and volunteer recreation groups. Introduces the history, philosophy and theories of recreation as well as career opportunities and professionalism in recreation.

REC 2010 - Principles 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.

REE-Real Estate Courses**REE 2001 - Real Estate Brokers I (6)**

Enables the student, in conjunction with REE 202 - Real Estate Brokers II, to meet the educational requirements of the Colorado Real Estate Commission for a Colorado Real Estate Brokers' license. This course includes Real Estate Law and Practice, practical applications, and Current Legal Issues.

Corequisite: REE 2002.

REE 2002 - Real Estate Brokers II (6)

Enables the student, in conjunction with REE 201 - Real Estate Brokers I, to meet the educational requirements of the Colorado Real Estate Commission for a Colorado Real Estate Brokers' license. This course includes Colorado Contracts and Regulations, Closings, and Recordkeeping and Trust Accounts.

Corequisite: REE 2001.

REE 2075 - Special Topics (1-12)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

REE 2085 - Independent Study (1-3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor

Prerequisite: Permission of instructor.

RTE-Radiologic Technology Courses

Students must be accepted into the Radiology Technology Program to take any RTE course other than RTE 1001 and RTE 2055. Please visit the program website for information regarding the application and admission process.

RTE 1001 - Introduction to Radiography (2)

Introduces radiology including equipment, exposure, positioning and the knowledge necessary for the radiography student to provide safe patient care including communication skills, body mechanics, patient transfer, and radiography as a profession.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

RTE 1011 - Radiographic Patient Care (2)

Introduces the fundamentals of human diversity; and legal and ethical considerations. Includes lecture and laboratory experience in patient care, standard and transmission based precautions, asepsis versus non-asepsis, vital signs, venipuncture, medical emergencies, drug administration, patients with specific needs and end-of-life interactions.

RTE 1021 - Radiologic Procedures I (3)

Introduces the fundamentals of radiographic equipment and safety, positioning, terminology, anatomy, pathology, and radiographic procedures of the chest, abdomen, and upper extremities.

RTE 1022 - Radiologic Procedures II (3)

Reinforces the fundamentals of radiographic positioning. Introduces anatomy, pathology, and skills necessary to perform radiographic procedures of the lower extremity, pelvis, spine, and bony thorax.

RTE 1031 - Radiogr Pathology/Image Eval (1.5)

Provides an introduction to the evaluation of the pathologies related to the respiratory, digestive, and urinary systems.

RTE 1032 - Radiog Pathology/Image Eval II (1.5)

Provides an introduction to the evaluation of the pathologies related to the skeletal, circulatory, and nervous systems.

RTE 1041 - Radiographic Equip/Imaging I (3)

Introduces the fundamental aspects of radiographic equipment including the basic concepts pertaining to x-ray production, x-ray equipment, and photon interactions with matter.

RTE 1042 - Radiographic Equip/Imaging II (3)

Provides in-depth knowledge of scatter control, radiographic exposure technique, image acquisition, process, and fluoroscopy. Includes criteria and factors that affect image quality, quality assurance and healthcare informatics

Prerequisite: RTE 1041.

RTE 1071 - Clinical Preparation: RTE (3)

Prepares the beginning radiography student for clinical internship. Includes training in introductory skills necessary for clinical internship to include patient care, procedures, and clinical site orientation and expectations.

RTE 1081 - Internship: Radiographic I (3)

Introduces the clinical education experience at the healthcare facility. The course focuses on the application of knowledge to the actual practice of radiography.

RTE 1082 - Internship: Radiographic II (5)

Builds upon prior clinical internship experience to advance student proficiency in the practice of radiography in the healthcare facility. The course focuses on the application of knowledge to the actual practice of radiography.

RTE 1083 - Internship: Radiographic III (6)

Reinforces and builds independence in the clinical internship experience. Applies radiographic knowledge learned in the classroom and prior clinical internship experience.

RTE 2021 - Advanced Medical Imaging (3)

Offers advanced imaging techniques including radiographic procedures involving the skull, trauma, mobile, surgical, pediatric, special procedures and advanced modalities.

RTE 2031 - Radiation Biology/Protection (2)

Provides the basic knowledge and understanding of the biologic effects of ionizing radiation and radiation protection and safety.

Prerequisite: RTE 1041.

RTE 2040 - Principles of CT Imaging (3)

Exploration of the history, physical principals, and instrumentation involved in Computed Tomography (CT), to include image creation, processing, display, and archiving. Identify the factors affecting image quality as well as artifact reduction, and radiation safety, and quality control.

RTE 2055 - Multiplanar Sectional Imaging (2)

Offers advanced knowledge in multi-planar/multi-modality sectional anatomy for medical imaging professionals.

RTE 2060 - Magnetic Resonance Imaging (3)

Provides an in-depth study of the physics and instrumentation, clinical applications, and quality control process involved in Magnetic Resonance Imaging (MRI).

RTE 2081 - Radiographic Internship IV (9)

Introduces the student to the radiographic specialty areas of Pediatrics, Geriatrics, the out-patient clinic, as well as increasing proficiency in general radiography.

Prerequisite: RTE 1083.

RTE 2082 - Radiographic Clinical Intern V (9)

Introduces the student to the radiographic specialty areas of pediatrics, geriatrics, the out-patient clinic, portable and trauma radiography as well as increasing proficiency in general radiography.

Prerequisite: RTE 2081.

RTE 2084 - Internship (Variable)

Provides the student with supervised hands-on training in advanced field of medical imaging. Allows the student to gain the clinical experience necessary to work in the specified area of advanced practice.

RTE 2085 - Independent Study (3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

RTE 2089 - Capstone (3)

Prepares the radiologic technology student to sit for the American Registry of Radiologic Technologists (ARRT) certification examination through a comprehensive review of RTE program curriculum, with practice answering certification examination-type questions through the administration of multiple mock certification exams. Provides the student with the requisite skills to effectively search for a job in medical imaging.

Prerequisite: RTE 2081.

SBM-Small Business Management Courses

SBM 1001 - Starting a Small Business (1)

Provides a brief overview of various topics related to starting a small business. Some topics are types of businesses, location, image, insurance, permits, and licenses.

SBM 1003 - Legal Aspects-Small Business (1)

Provides a brief overview of legal issues involved in starting and managing a small business. The course focuses on business organizations, contracts, and agreements and protecting the business.

SBM 1006 - Recordkeeping-Small Business (1)

Provides an overview of record keeping for a small business. Students learn basic bookkeeping skills and key record keeping requirements.

SBM 1008 - Marketing for a Small Business (1)

Provides a brief overview of the marketing functions applied to a small business. Topics include planning a marketing strategy, promoting a business, competitive analysis, and customers and prospects.

SBM 1010 - Managing a Small Business (1)

Provides a brief overview of the management process as it applies to the small business. Concepts covered in the course include setting goals, conducting evaluations, and analyzing financial records.

SBM 1012 - Financing a Small Business (1)

Provides a brief overview of the basics of financing a small business. Topics include sources of capital, types of business loans, and maintenance of cash flow.

SBM 1013 - Writing a Business Plan (1)

This is the final course in the small business certificate program. Students will write a business plan from the material they have developed in the other courses.

SBM 1075 - Special Topics (1-3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

SCI-Science Courses

SCI 1055 - Integrated Sci I w/Lab: 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. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 0250 or equivalent placement scores.

SCI 1056 - Integrated Sci II w/Lab: 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. This is a statewide Guaranteed Transfer course in the GT-SC1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 0250 or equivalent placement scores.

SCI 1105 - Science in Society: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and MAT 0250 or equivalent placement scores.

SOC-Sociology Courses

SOC 1001 - Intro to Sociology I : 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

SOC 1002 - Intro to Sociology II: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

SOC 1015 - Quest for Identity (3)

Emphasizes basic theories and concepts on the development of self, interpersonal relationships, and the study of family structures in US society.

SOC 1017 - Life Goals and Achievements (3)

Focuses on the use of sociological knowledge to explore how self-concept develops. Additionally, this course examines how one's past as well as one's present actions affect changes in self-concept. Finally, this course explores methods of stigma reduction and identity creation.

SOC 1075 - Special Topics (0)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

SOC 2005 - Soc Of Family Dynamics: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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

SOC 2007 - Environmental Sociology: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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

SOC 2015 - Contemp. Social Problems: 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 skills.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

SOC 2016 - Sociology Of Gender: 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.

SOC 2018 - Sociology of Diversity: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

SOC 2020 - Sociology of Religion: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

SOC 2031 - Sociology-Deviant Behavior: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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

SOC 2037 - Sociolgy Of Death&Dying: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

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.

SOC 2075 - Special Topics (3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

SOC 2080 - Internship (1-3)

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.

SOC 2085 - Independent Study (3)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

SPA-Spanish Courses

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 conversations patterns, expressions, and grammar.

Prerequisite: Grade of C or higher in the following course: SPA 1001 or permission of instructor.

SPA 1009 - Spanish for Travelers (2)

Introduces the basic vocabulary and expressions useful to travelers in the Spanish speaking countries. The course will concentrate on the customs, traditions and cultural attitudes to be discovered by a visitor to the destination country. Cultural diversity and global awareness are integral to this course of study. This course does not fulfill Humanities Area Requirements. Not intended for transfer.

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: Grade of C or higher in the following course: SPA 1011 or permission of instructor.

SPA 2011 - Spanish Language III: 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: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and SPA 1012 or permission of instructor.

SPA 2012 - Spanish Language IV: AH4 (3)

Continues Spanish Language I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the Spanish language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. This is a statewide Guaranteed Transfer course in the GT-AH4 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores and SPA 2011 or permission of instructor.

SWK-Social Work Courses**SWK 1000 - Introduction to Social Work (3)**

Introduces students to the philosophy of the social work profession including the knowledge, values, ethics, roles and skills inherent to generalist social work.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

SWK 1200 - Intervention Techniques (3)

Covers basic communication skills essential in working in the human services field. Listening techniques, empathic response skills and rapport building techniques are taught.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

THE-Theater Courses**THE 1004 - Basic Costume/Apparel Const (3)**

Provides students with training in cutting and sewing techniques, as well as knowledge of fabric types, qualities, uses, and cleaning.

THE 1005 - Theatre Appreciation: AH1 (3)

Includes discussions, workshops, and lectures designed to discover, analyze and evaluate all aspects of the theatre experience: scripts, acting, directing, staging, history, criticism and theory. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

THE 1008 - Theatre Script Analysis: AH1 (3)

Introduces students to methods of reading and analyzing literature for the stage. In addition, students will apply staging and design concepts in visualizing and analyzing how a play looks, sounds, and feels when produced. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

THE 1009 - Basics of Pattern Drafting (3)

Provides students with basic techniques in pattern drafting. Techniques will include exploring computer design as well as traditional drafting methods.

Prerequisite: Grade of C or higher in the following course: THE 1004 or permission of instructor.

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.

Prerequisite: Grade of C or higher in the following course: THE 1011 or permission of instructor.

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 1026 - Auditioning-Musical Theater (3)

Builds a confident, talented and exciting audition. It includes a mock video taped audition, and covers resumes, head shots, repertoire choices, stage fright, 16-bar audition and dressing for success. This course is presented in conjunction with producers from regional theaters providing valuable feedback for the participants.

THE 1029 - Intro-Entertainment Industry (3)

Teaches the student an overview of what the Entertainment Industry is and what skill sets are required to enter this field.

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 theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

THE 1035 - Stage Makeup I (3)

Explores stage makeup design and application techniques including basic corrective, character, old age, animal, and fantasy applications.

THE 1036 - Stage Makeup II (3)

Continues to examine theatrical makeup design and application techniques, adding prosthetics, hair design and other advanced applications.

THE 1052 - Production Stage Management I (3)

Focuses on the basics of stage management, including making a stage manager's book, organizational methods and protocols of production, calling cues in production and personnel relationships and responsibilities.

Prerequisite: Grade of C or higher in the following course: THE 1016 or permission of instructor.

THE 1075 - Special Topics (1-6)

Provides the student with a vehicle to pursue in depth exploration of special topics of interest.

THE 1088 - Practicum (3)

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.

THE 180 - Internship (0)

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.

THE 2000 - Paint/Draw/Rende/Model Techs (3)

Introduces art techniques that are needed specifically in Theatrical Design. Techniques will include painting, rendering of scenic, lighting, costume designs, and model construction techniques.

THE 2002 - Intermed Costume Construction (3)

Provides additional training and experience in cutting and sewing methods for costumes, as presented in THE 1004 Basic Costume and Apparel Construction. Students are introduced to elements of costume garment design, research and advanced construction techniques.

THE 2010 - Singing for Actors (3)

Allows students to explore and perform Musical Theatre songs. Students utilize a pedagogical approach to evaluate their vocal structure and formulate a systematized series of vocal and whole body exercises to develop and enhance their self-confidence and vocal instrument through in-class performance and variety show presentation.

THE 2011 - Development of Theatre Greek-Renaissance: GT-AH1 (3)

Surveys the history and evolution of drama from Ancient Greece to the Renaissance, emphasizing all aspects of the art from period values to analysis of dramatic literature and performance. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

THE 2012 - Dev of Theatre Restor-Mod: AH1 (3)

Surveys the history and evolution of drama from the Renaissance to the present, emphasizing all aspects of the art from period values to the analysis of dramatic literature and performance. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

THE 2015 - Playwriting: AH1 (3)

Gives students the opportunity to learn and practice playwriting techniques, thereby improving creative writing skills. Elements of dramatic structure, dialogue, styles, and theatrical practices are emphasized. This is a statewide Guaranteed Transfer course in the GT-AH1 category.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

THE 2016 - Theatre Lighting and Design (3)

Focuses on the theory and practice of stage lighting. Topics include basic electrical theory, color theories, rigging and design of lighting for performing arts.

Prerequisite: Grade of C or higher in the following course: THE 1016.

THE 2020 - Directing I (3)

Covers basic techniques for stage directing in contemporary theatre. Topics to be covered include stage composition, script analysis, work with actors, and the collaborative role of the director.

THE 2021 - Set Design for Film & Theatre (3)

Emphasizes two- and three-dimensional drawing and designs and color theory. Students construct 3-D models and a theatrical stage set.

Prerequisite: Grade of C or higher in the following course: THE 1016 or permission of instructor.

THE 2022 - Millinery & Costume Accessory (3)

Provides students with training in costume crafting techniques. In addition to the emphasis on millinery skills and hat making, students will learn leather making, jewelry making, and to craft a variety of costume accessories.

THE 2026 - Theatre Sound Op and Dsgn I (3)

Explores the fundamental processes required to create a conceptual sound design for a stage play. Students apply skills gained in this course to an actual production.

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 2045 - Bas Costume Design/Constructn (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.

Prerequisite: Grade of C or higher in the following courses: THE 1004 and THE 1009.

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.

THE 2075 - Special Topics: Theatre (1-6)

Explores current topics, issues and activities related to one or more aspects of the named discipline.

THE 2080 - Internship (1-6)

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.

THE 2085 - Independent Study (1)

Emphasizes structured and guided, individualized study that is organized and tailored around the interests and needs of the individual student.

THE 2088 - Practicum (3)

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.

WEL-Welding Courses

WEL 1000 - Safety for Welders (1)

Covers the hazards of welding on health and safety, locating essential safety information from a code or other standard, and identifying and applying shop safety procedures.

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.

WEL 1002 - Oxy-fuel Joining Processes (4)

Introduces safety inspections, minor repairs, operating parameters, oxyacetylene welding equipment, and oxyacetylene welding, brazing, and soldering operations. Blueprint reading skills will be practiced in this course.

WEL 1003 - Basic Shielded Metal Arc I (4)

Covers performing safety inspections, making minor repairs, adjusting operating parameters, and operating SMAW equipment utilizing E-6010 electrodes. Layout procedures and practices will also be introduced.

WEL 1004 - Basic Shielded Metal Arc II (4)

Covers performing safety inspections, making minor repairs, adjusting operating parameters, and operating SMAW equipment utilizing E-7018 electrodes. Layout procedures will be practiced during this course.

WEL 1006 - Blueprint Read-Welders/Fitters (4)

Covers interpreting weld symbols on blueprints, identifying proper layout methods and tools, and proper joint design necessary for various welding processes.

WEL 1010 - Advanced Shielded Metal Arc I (4)

Covers safety inspections, minor repairs, operating parameters, operation of SMAW equipment, and SMAW operations on groove and fillet welds utilizing E-6010 and E-7018 electrodes. Layout procedures will be practiced during this course.

WEL 1011 - Advanced Shielded Metal Arc II (4)

Covers safety inspections, minor repairs, operating parameters, operation of SMAW equipment utilizing various electrodes, essential welding information from codes or other standards, and performance of weld inspections.

WEL 1013 - Oxyfuel and Plasma Cutting (2)

Outlines the skills needed to set up equipment and perform cutting and gouging operations utilizing the oxyacetylene and plasma arc cutting processes.

WEL 1024 - Gas Tungsten Arc Welding I (4)

Covers welding in all positions and on various joint configurations using the GTAW (tig) welding process on carbon steel, stainless steel and aluminum. Student should be familiar with basic metallurgy pertaining to the weldability of metals, structural joints, and safety in the welding industry.

WEL 1025 - Intro-Gas Metal Arc Welding (4)

Covers welding in all positions and on various joint configurations using the GMAW (mig) welding process on carbon steel, stainless steel and aluminum. Student should be familiar with basic metallurgy pertaining to the weldability of metals, structural joints, and safety in the welding industry.

WEL 1030 - Maintenance Welding (2)

Gives the student a basic understanding of the Oxyacetylene cutting and Arc welding processes, and introduction to the skills and techniques used to develop fillet and groove welds. Students will be introduced to oxyacetylene, shielded, gas metal arc welding equipment set up, and various welding techniques. Safety will be stressed during the course.

WEL 1031 - Intro to Industrial Welding (4)

Provide the student with a basic understanding of commonly used welding techniques and procedures encountered in the industrial setting. Students are introduced to the Plasma Arc (PAC), Oxy Fuel Cutting (OFC), Shielded Metal Arc (SMAW), Gas Metal Arc (GMAW), Gas Tungsten Arc (GTAW) welding processes. Safe welding, shop and material handling practices are emphasized throughout the course. Weld symbols, metal characteristics are introduced. Proper electrode selection and power settings are presented. Skills and techniques used to develop fillet and groove welds are introduced and demonstrated by the students.

Prerequisite: Permission of instructor.

WEL 2001 - Gas Metal Arc Welding I (4)

Covers safety inspections, minor repairs, operating parameters, operation of GMAW equipment on plain carbon steel utilizing short circuit and spray transfer, and fundamental metallurgy principles.

WEL 2002 - Gas Metal Arc Welding II (4)

Covers safety inspections, minor repairs, operating parameters, operation of GMAW equipment utilizing a variety of electrodes and base metals, and fundamental principles of welding metallurgy to welding, fabrication, and inspection.

WEL 2003 - Flux Cored Arc Welding I (4)

Covers safety inspections, minor repairs, operating parameters, operation of FCAW equipment utilizing self shielded wire, and principles of joint design, preparation, and material selection to welding operations.

WEL 2004 - Flux Cored Arc Welding II (4)

Covers safety inspections, minor repairs, operating parameters, operating FCAW equipment utilizing gas shielded wire, and applying fundamentals of welding applications and cost estimating to welding, fabrication, and inspection.

WEL 2024 - Gas Tungsten Arc Welding II (4)

Covers welding in all positions on carbon steel, stainless steel and aluminum plate and carbon steel pipe with the GTAW process. Student should be familiar with basic metallurgy pertaining to the weldability of metals, structural joints, and safety in the welding industry.

WEL 2050 - Layout and Fabrication (4)

Develops welding and associated skills in the use of drawings and blueprints in planning. This course includes designing and layout projects.

WQM-Water Quality Management Courses

All courses are approved for Colorado State training units (TUs). Check with the WQM department for more information about the training units assigned to each course. The entire WQM program is offered either face-to-face, hybrid, remote, or online instruction. Check the current schedule of courses for listings.

WQM 1000 - Introduction to Water Quality (3)

Introduces environmental concepts utilized in the water industry. The course covers how the subjects of geology, chemistry, biology, and physics influence the water industry, the hydrologic cycle on a global scale, and how to monitor and maintain water quality.

WQM 1005 - Specific Calcs-Water Qual Mgmt (4)

Provides an in-depth study of the calculations associated with water and wastewater treatment. Topics include dimensional analysis, manipulation of conversion factors, geometric figures, velocities, detention time, surface loading, filtration and backwash rates, porosity, weir overflow rates, efficiencies, weight of dry solids, sludge pumping, settleable solids, volatile solids, mean cell residence times, settleability, disinfection and chemical dosage as relating to trickling filters, ponds, RBC, and activated sludge.

WQM 1019 - Basic Water Quality Analyses (4)

Introduces laboratory analyses done in the water industry. The course covers the functionality and use of analytical instruments for safely analyzing water samples for common parameters relevant to the water industry. Water chemistry topics are explored to explain the use and function of the instrumentation.

Prerequisite: Grade of C or higher in the following course: ENG 1021.

WQM 1020 - Water Quality Equip Maint I (4)

Provides a general understanding of mechanical and electrical equipment and its maintenance. Topics include safety procedures; correct use of power and hand tools; and preventive maintenance and repair maintenance of pumps, motors, chlorinators, motor control units, and other treatment plant equipment.

WQM 1022 - Basic Elec-Water Quality Sys (4)

Provides an understanding of electrical theory, various types of electrical equipment found in treatment facilities, operation, troubleshooting basic electrical problems, and safety procedures.

WQM 1023 - Water Reuse System (3)

Provides an in-depth study of water reuse systems and discusses the continuous development in the industry. This course will cover different treatment techniques and the applications for water reuse.

WQM 1024 - Water Certification Review for C & D (3)

Provides an overview of the water treatment process. The course covers the official need-to-know criteria prepared by the Association of Board Certifications as a preparation for the Colorado State Water Operators D-level water treatment exam.

WQM 1025 - Wastewater Certification Review for C&D (3)

Provides an overview of the wastewater treatment process. This course covers the official Need to Know criteria prepared by the Association of Board Certifications as a preparation for the Colorado State Water Operators D-level wastewater treatment exam.

WQM 1026 - Safety & Security Systems (3)

Provides a study of safety procedures performed in the water and wastewater industry. This course covers the importance of safety and how to implement safety practices in the workplace by studying OSHA guidelines, driving practices, confined spaces, and chemical handling.

WQM 1030 - Water Chemistry (3)

Applies chemistry concepts to the water industry. Instruction is provided in the use of equivalent weights, available valences and reactivity, mixing of solutions, and the use of acids, bases, and salt-based compounds. Management of laboratory supplies related to proper handling and storage of chemicals used in the water industry is included.

WQM 1035 - Water Utility Technician (4)

Covers topics in water distribution and wastewater collection systems including operations, maintenance, and construction for small to large systems. The content delivered in the course meets the "Need to Know" criteria listed for the Water Distribution Operator state licensing exam and the Wastewater Collections Operator state licensing exam.

WQM 1069 - International Development (3)

Provides a global perspective of water issues and innovations. This course covers issues related to global water availability, quality, and access as they apply to the societal, environmental, and economic barriers to water. Water issues and innovations occurring throughout the world will be examined to generate possible solutions and action plans.

WQM 2000 - Hydraulics-Water Quality Mgmt (4)

Introduces the mathematical principles of density, specific gravity, pressures, horsepower and energy costs, velocities, weirs, parshall flumes, venturi meters, California Pipe method, flows from open end pipes, settling velocities and classification of flows.

Prerequisite: Grade of C or higher in the following course: WQM 1005 or MAT 1340.

WQM 2006 - Design Interp-Water Qual Mgmt (4)

Provides an in-depth study and interpretation of the State of Colorado Design Criteria for both water and wastewater systems. The course includes reading blueprints, scale drawings, contour maps, profile drawings, and symbols relevant to the water and wastewater industries.

WQM 2016 - Bio/Bacteriological Water Qual (4)

Provides an in-depth study of microorganisms in the water industry. The course covers analysis of various water samples to identify different microorganisms and explore how these impact the water industry. Interpretation of mathematical formulas, instrumentation application, and proper lab protocols are covered.

Prerequisite: Grade of C or higher in the following course: WQM 1019.

WQM 2017 - Disinfect Tech-Water Qual Syst (4)

Covers disinfection techniques used in water and wastewater treatment systems. Course topics include safety procedures, dosing equations, and the importance of disinfection for environmental and human health.

WQM 2030 - Indust Monitoring & Treatment (3)

Provides an understanding of industrial treatment. Various types of treatment systems are reviewed such as floatation, screening and microscreening, neutralization, coagulation and precipitation, adsorption, filtration, pure oxygen systems, chemical feed systems. Also included are safety, collection and preserving of samples, establishing an industrial monitoring program, operational strategies, interpretation of laboratory results, start-up/ shutdown of systems, maintenance, plans and specification, various types of industrial wastes and troubleshooting.

WQM 2075 - Special Topics (3)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

WQM 2080 - Internship (1-6)

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.

WQM 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.

WQM 3011 - Survey of Envirn Water Acts (2)

Analyzes the application of the Clean Water Act and the Navigation and Navigable Waters Code in a global, national, and regional context. This course will investigate the impact of the policies on Colorado water resource management and laws.

WQM 3012 - Survey Safe Drinking Water Act (2)

Describes the application and impacts of drinking water regulations at the federal and state level. Students will interpret the Safe Drinking Water Act and explore how required monitoring impacts public health and public water supply systems.

WQM 3027 - Water Industry Management (3)

Familiarizes students with the best management practices within a utility or governmental sector. Students will explore the water environment, decision strategies, utilities and governmental structure, and tasks specific to the water industry. The students will analyze managerial decisions made within the water industry and how those decisions affect others.

WQM 3045 - Principles of Hydrology (3)

Explains the quantitative relationship between the hydrosphere and the atmosphere and their impact on hydrologic systems, processes of the hydrologic cycle. Students will learn why each physical hydrologic process varies spatially and temporally with an emphasis on environmental effects. Each process will be measured, estimated, and modeled using real-time data from governmental water quality sites.

Prerequisite: Grade of C or higher in the following course: MAT 1340.

WQM 4021 - Enviro Sampling & Containment (3)

Covers environmental sampling for laboratory analysis. Students will select and prepare appropriate sample containers, keep accurate sampling records, access sampling sites, and conduct environmental sampling. This course includes sampling safety skills, as well as quality control and assurance methods.

Prerequisite: Grade of C or higher in the following course: WQM 1019.

WQM 4027 - Managing Water Projects (3)

Teaches how to design a water project by utilizing plans, allocating resources, and controlling and executing activities. Students will interact with peers, alumni, and faculty throughout the life cycle of the water project. Students will control the project through initiation, execution, and closure in a clear and practical manner.

WQM 4028 - Water Data Mgmt & Analysis (3)

Provides an overview of techniques for data analysis including forecasting, strategic planning, and public relations. This course includes a review of statistical calculations and how data dictate effluent permits and drinking water standards.

Prerequisite: Grade of C or higher in the following course: MAT 1340.

WQM 4055 - Human/Water Eco Relationships (3)

Explores water resource management and global environmental change. This course introduces a systems-thinking approach to watershed management. Major topics include urban planning, best management practices, water policies, and future global water needs.

WQM 4060 - Source Water Management (3)

Evaluates source water systems and water resources used to meet public, industrial, and commercial needs. This course is designed to aid future planning strategies with ground water, ground water under the influence of surface water, and surface water. The course will include demand forecasting, water rights, alternative sources, storage, injection and hydraulic modeling, watershed management, and integrated resource planning. Recommended: WQM 3011, WQM 3012.

WQM 4065 - Water Toxicity Impacts (4)

Describes a foundation of toxicology as it pertains to water and human health. This course includes topics such as fate and transport of toxic pollutants, dose-response curves, analytical and remediation methods, and characterization of risks.

Prerequisite: Grade of C or higher in the following courses: CHE 1111 and either BIO 1005 or CHE 1112.

WQM 4080 - Senior Internship (3)

Provides an opportunity for students to apply the theoretical concepts and skills learned through their academic program with a practical experience in a water quality field. Interns will work alongside industry professionals to apply a wide variety of information related to water industries.

Prerequisite: Senior Status, or 90 credits toward BAS degree completed.

WQM 4089 - Senior Capstone (3)

Provides an opportunity for students to apply the theoretical concepts and skills learned through their academic program with a research project in a water quality application. Students will work alongside faculty and/or industry professionals to design and produce solutions to water related environmental or industrial water problems.

Prerequisite: Senior Status, or 90 credits toward BAS degree completed.

WST-Women and Gender Studies**WST 2000 - Intro Women`s Studies: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

WST 2200 - Goddess/Women Anct Wrld: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

WST 2300 - Women's Sexuality: 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.

Prerequisite: Grade of C or higher in the following courses: CCR 0092 or CCR 0094 or equivalent placement scores.

Staff & Faculty Directory

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Derek Grubb, Executive Director of Planning, Analytics, and Effectiveness
Liz Cox – Director of Innovation and Engagement
Kathy Schissler, Executive Assistant to the President

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Director, Facilities

Wren Barnes

Director, Marketing and Communications

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Dean, Academic Affairs

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Outstanding Faculty Member of the Year, 2017

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B.S.N., Memphis State University

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Outstanding Faculty Member of the Year, 2016
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Licensed Master Electrician; A.A.S., Red Rocks Community College; B.U.S., University of Tennessee

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Ph.D., University of California at Los Angeles; C.Phil., University of
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The Student Voice Endowed Teaching Chair, 2007-2009
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Outstanding Faculty Member of the Year, 1996
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Musette Sieminski

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B.A., Metropolitan State University

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